"ON-TASK IN A BOX": A VALIDATION STUDY EXAMINING AN EVIDENCE-BASED PACKAGE INTERVENTION FOR INCREASING RATES OF ON-TASK BEHAVIOR AND ACADEMIC PERFORMANCE

by

Brian Scott King

A dissertation submitted to the faculty of
The University of Utah
in partial fulfillment of the requirements for the degree of

Doctor of Philosophy

Department of Educational Psychology

The University of Utah

August 2013

The University of Utah Graduate School

STATEMENT OF DISSERTATION APPROVAL

The dissertation of **Brian Scott King**

has been approved by the following supervisory committee members:

William R. Jenson	, Chair	**5/31/13** Date Approved
Daniel E. Olympia	, Member	**5/31/13** Date Approved
Lora Tuesday-Heathfield	, Member	**5/31/13** Date Approved
Robert E. O'Neill	, Member	**5/31/13** Date Approved
Fulvia E. Franco	, Member	**5/31/13** Date Approved

and by **Elaine Clark**, Chair of the Department of **Educational Psychology**

and by Donna M. White, Interim Dean of The Graduate School.

ABSTRACT

On-Task in a Box is an evidence based intervention system designed to increase a student's rates of on-task behavior and academic achievement. The primary interventions that are used in the program include self-monitoring and video modeling. The program also includes motivation systems for keeping students excited about participation in the intervention. The purpose of this study was to be the first to evaluate the acceptability and effectiveness of the On-Task in a Box program for increasing rates of on-task behavior and enhancing academic achievement.

The study was conducted at two separate elementary schools. Five male students and one female student in the second and third grades identified as displaying high rates of off-task behavior by their classroom teacher were included in the study. A yoked multiple-baseline, multiple-probe design was used to evaluate the intervention package over the course of approximately 4 weeks. Dependent variables included rates of on-task behavior, academic productivity, and teacher and participant satisfaction with the intervention. Comparison data from classroom peers for on-task behavior were also collected.

Results showed significant increases in on-task behavior for each of the 6 participants. At baseline, the rate of on-task behavior displayed by the 6 participants while working on independent math assignments averaged 21% of the intervals observed. During the intervention, the participants' average rate of on-task behavior increased to

68% of the intervals observed. Follow-up observations of the participants 3 weeks after the termination of the study showed that the gains in on-task behavior achieved during the intervention were maintained. Improvement in academic performance during independent seatwork in math for both problems completed and accuracy was observed. Teacher and participant feedback concerning the use and effectiveness of the intervention package were positive.

As a result of implementing the intervention package, each participant involved in the study displayed increases in rates of on-task behavior and academic achievement. On-Task in a Box includes all of the materials necessary to effectively implement research-based interventions in one package. The program represents an effective and viable method for school professionals to increase on-task behavior and academic performance for students who display high rates of off-task behaviors.

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

ACKNOWLEDGEMENTS

I would like to thank my chair, Dr. William R. Jenson, and my committee members for their input and support throughout this process. I would also like to thank the students and faculty at the two elementary schools where this study was conducted. This study could have never gone forward without their enthusiasm and willingness to help. A special thanks goes out to Buddy Alger for going above and beyond the call of duty each and every time he was called upon. Finally, I would like to thank my beautiful wife and two wonderful children for their love and support. They remain my true inspiration.

INTRODUCTION AND LITERATURE REVIEW

It has been estimated (Rhode, Jenson, & Reavis, 2010) that the average student that experiences academic or behavioral difficulties in the classroom is on-task 50% of the time or less. In comparison, students who are performing reasonably well in the classroom are on-task about 85% of the time. This equates to a 35% difference, which represents a substantial loss of classroom instruction that can result in academic difficulties. Thus, it stands to reason that interventions that target specific on-task behaviors are likely to produce covariant positive effects such as increases in academic achievement (DiPerna & Elliot, 2002; Ducharme & Shector, 2011) as well as decreases in the frequency of disruptive behaviors that a student may manifest in the classroom (McKissick, Hawkins, Lentz, Hailley, & McGuire, 2010), The ability to remain on-task is a highly valued "teacher pleasing behavior" (Walker & Rankin, 1983; Walker, Ramsey, and Gresham, 2004) and is related to improved levels of teacher acceptance. Additionally, higher rates of on-task behavior are also related to lower rates of peer-rejection and aggression at school (Leflot, Lier, Onghena, & Colpin, 2013).

Elevated rates of off-task behavior displayed by one or more students in the classroom are a common reason for referral to school support personnel (Roberts, 2003). However, because support personnel often work out of offices, it can be difficult for them to have a direct impact in the classroom. Therefore, it is important that support personnel

choose intervention strategies that effectively increase on-task behavior even when they are not present in the classroom. The use of evidence-based practices such as self-monitoring, peer-modeling, and self-modeling have all been shown to effectively increase rates of on-task behavior (Amato-Zeck, Hoff, Doepke, 2006; Clare, Jenson, Kehle, & Bray, 2000; King, 2012; Richards, Tuesday-Heathfield, & Jenson, 2010) with minimal support from related service personnel. However, these interventions are not used regularly due to the fact that it can be difficult and time consuming to gather all of the information and materials necessary to run these interventions effectively. Dingfelder and Mandell (2011) have indicated that package-ready programs that school staff can run with the resources available to them and which provide all of the necessary components to run the program are more likely to be adopted and implemented. On-Task in a Box is a package-ready intervention program that includes self-monitoring and video-modeling as major components. The current study evaluates the effectiveness of this package-ready program, implemented by related service personnel, to improve rates of on-task behavior.

On-Task Behavior and Academic Performance

As a whole, there is significant overlap between the definitions of academic engagement and on-task behavior. Nystrand and Gamoran (1991) described two types of academic engaged time. The first is procedural, in which observed behaviors such as paying attention and completing assignments are included. The second is substantive, which is a student's sustained engagement in instruction. Ducharme and Shector (2011) describe a student as being on-task "when they are actively engaged in classroom activities that facilitate learning, and not engaged in behaviors that detract from learning"

(p. 266). Ponitz et al. (2009) describe engagement as "correspondence between a child's observable behavior and the demands of the situation, including attending to and completing tasks responsibly, following rules and instructions, persisting in the face of difficulty, and exercising control" (p.104). Behaviors such as maintaining eye contact with the classroom teacher or task and performing requested tasks in a timely manner have been identified as central components of attending or being on-task by Reavis et al. (1996) and Jenson, Rhode, and Reavis (1995).

Ducharme and Shecter (2011) described a student's ability to remain on-task in the classroom as a "keystone" behavior. They define a keystone behavior as being a "relatively circumscribed target behavior that is foundational to a range of skills and related to other responses such that, when modified, can have a substantial positive influence on those other responses" (p. 261). A student's ability to remain on-task qualifies as a keystone behavior because on-task and problem behaviors are intrinsically incompatible. If a student is engaged in an appropriate activity, it stands to reason that they cannot be engaged in various inappropriate behaviors at the same time. Interventions that target specific on-task behaviors are likely to produce covariant positive effects such as increases in academic achievement (Ducharme & Shector, 2011) and decreases in disruptive behaviors (McKissick, Hawkins, Lentz, Hailey, & McGuire, 2010).

Behaviors and nonacademic skills that contribute to academic success have also been referred to as promoting or enabling skills (DiPerna & Elliot, 2002). DiPerna and Elliot (2002) identified a student's ability to remain engaged in the classroom as an "academic enabler." Academic enablers are defined as "attitudes and behaviors that allow a student to participate in, and ultimately benefit from, academic instruction in the

classroom" (p. 294). As an academic enabler, a student's ability to remain engaged in academic tasks has been shown to help promote their academic achievement (Brigman, Lane, Switzer, Lane, & Lawrence, 1999; DiPerna, Volpe, & Elliot, 2001).

With all of the benefits that have been shown to be associated with increased frequency of on-task behavior, it becomes apparent that using interventions and programs that increase a student's ability to remain actively engaged in appropriate classroom activities is an integral part of helping them to achieve success in the classroom. In fact, interventions that contribute to student's engagement in learning lead to more orderly and positive classroom environments, increase time focused on learning and increases in school attendance and graduation rates (National Association of School Psychologists, 2010). Interventions such as self-monitoring, self-modeling, and peer-modeling have all been shown to increase on-task behavior and thus increase the amount of time that a student is able to engage in academic learning and activities.

Self-Monitoring

Self-monitoring strategies help students control and keep track of their own behavior, which leaves teachers with more time to focus on teaching academic skills (Sheffield & Waller, 2010). The procedure is easy to implement as well as time and cost efficient, making it an attractive method of behavior change in the school environment (Wood, Murdock, Cronin, Dawson, & Kirby, 1998). Self-monitoring is a positive intervention procedure in which a student observes and collects data concerning his or her own behavior (Jenson, Rhode, & Reavis, 1995). The procedure includes two basic steps. First, a student assesses his or her own behavior and decides if a target behavior

has occurred. Second, the student records the occurrence of the target behavior (Prater & Hogan, 1992). The occurrence of the behavior can be recorded at the student's own desk on a small card, sheet, checklist, or form (Sheffield & Waller, 2010). A student can be prompted to self-monitor using a variety of methods (Shapiro, 2004). Prompts to self-monitor can include strategies such as using audio signals (Prater & Hogan, 1992), watching a clock (Dalton, Martella, & Marchand-Martella, 1999), a cell phone (Quillivan & Skinner, 2011), or a tactile prompt such as the MotivAider (Amato-Zech, Hoff, & Doepke, 2006; Vance, Gresham & Dart, 2012).

Due to the reactive effect that often occurs when a student becomes conscious of the frequency of his or her own behavior, the act of marking and keeping track of a behavior can change how often a certain behavior occurs by itself without the use of a reward (Reavis et al., 1996). Because of this reactive effect, self-monitoring interventions can produce desired results regardless of whether or not a student accurately or inaccurately monitors his or her own performance (Agran, Sinclair, Alper, Cavin, Wehmeyer, & Hughes, 2005; Wehmeyer, 2007). Adding a self-graphing component to a self-monitoring procedure, where students plot their own rates of behavior on a simple graph after each self-monitoring session, can further increase the reactive effects of self-monitoring procedures. (DiGangi, Magg, & Rutherford, 1991).

Self-monitoring procedures have been shown to be an effective treatment for increasing behavioral (Sheffield & Waller, 2010) and academic performance (Joseph & Eveleigh, 2011; Perry, Albeg, & Tung, 2012) alone (Harris, Freidlander, Saddler, Frizzle, & Graham, 2005; Maag, Reid, & DiGangi, 1993) or as a component of an intervention package (Sheffield & Waller, 2010). These interventions have also been used

successfully with students with a variety of diagnoses or classifications (Briesh & Chafouleas, 2009) and can be used successfully in a general education (Vance, Gresham, & Dart, 2012) and special education classroom (Amato-Zech, Hoff, & Doepke, 2006). More specifically, self-monitoring has been used successfully with students with learning disabilities (Wolfe, Heron, Yvonne, & Goddard, 2000), intellectual disability (Coughlin, McCoy, Kenzer, Mathur, & Zucker, 2012), attention-deficit hyperactivity disorder (Mathes & Bender, 1997), and autism spectrum disorders (Holifield, Goodman, Hazelkorn & Heflin, 2010; Southhall & Gast, 2011).

Although self-monitoring has a variety of applications, one of the most studied areas reported in the self-monitoring research is the effect that self-monitoring interventions have had on increasing on-task behavior (Reid, 1996). In a review of 22 studies that used self-monitoring to increase on-task behavior, Reid (1996) concluded that the effects of self-monitoring procedures on increasing on-task behavior are robust and have been demonstrated to yield positive results across age levels and instructional settings. Self-monitoring can be particularly effective for improving on-task behavior in classrooms where students are required to complete independent seatwork (Prater, Joy, Chilman, Temple, & Miller, 1991).

A study in which 6 students previously diagnosed with ADHD participated in a self-monitoring intervention designed to increase rates of on-task behavior was conducted by Harris, Frieldlander, Saddler, Frizzelle, and Graham (2005). The participant pool in this study was made up of both male and female students in the third through fifth grades, who had been identified by their teachers and special education teachers as having difficulty remaining on-task.

As part of the intervention, the students met individually with their special education teacher for a training session during which time they discussed the importance and meaning of paying attention. During this training session, participants were taught to ask, “Was I paying attention?” upon hearing a taped tone. Each time they heard the tone, the participants were also taught to self-record whether or not he or she was on-task by marking a tally sheet that contained “yes” and “no” columns. The intervention took place in each participant’s special education classroom while they participated in a 15-minute spelling period. During the intervention, the participants heard the self-monitor prompt tone from headphones that were connected to a tape player. The tone sounded at random intervals with a mean of 45 seconds. The self-monitoring intervention was not combined with any form of external reinforcement.

Using this method, each student’s rates of on-task behavior increased significantly. As a group, the participant’s on-task rates at baseline averaged 55% of the intervals observed. While receiving the intervention the 6 participants’ mean rate of on-task behavior increased to 94% of the intervals observed.

Mathes and Bender (1997) conducted a study where students with attention-deficit/hyperactivity disorder (ADHD) who were already receiving pharmacological treatment participated in a self-monitoring intervention designed to increase rates of on-task behavior. The participants in this study consisted of 3 elementary school boys in the third, fourth, and fifth grades. Each participant received some of his core instruction in a special education classroom.

At the beginning of the intervention phase, the participants’ special education teacher introduced the self-monitoring procedure and explained the difference between

on- and off-task behavior. After this, the teacher presented the participants with a tape recorder, a set of headphones, a cuing tape, and a self-monitoring sheet. Each time a participant heard a prompt from their headphones, they were taught to ask themselves, "Was I paying attention when I heard the tone?" They were then taught to check the self-monitoring sheet under "yes" or "no" and then return to work. The self-monitoring procedure was reviewed with the participants on each of the 2 days following the initial training.

The self-monitoring intervention took place in a special education classroom while each participant completed independent seatwork. A fading phase took place after 10 days of the intervention. During this phase, the participants did not use the cuing tape. During the fading phase of the study, each student was taught to simply ask himself the question, "Was I paying attention?" whenever they thought about it. During this phase, the participants continued to record their responses on the tracking sheet. A second fading phase also took place. During this phase, the participants simply asked themselves, " Was I paying attention?" No recording took place during the second fading phase.

Using this self-monitoring procedure, each participant's rates of on-task behavior increased significantly during the study. The percent of intervals of on-task behavior during baseline were 40%, 38%, and 37% for the respective participants. During the first phase of the intervention, the participants' rate of on-task behavior increased to 97%, 87%, and 94%, respectively. During the fading phases, the participants' rates of on-task behavior remained much higher than at baseline. During the final fading phase, the participants were observed to be on-task 99%, 97%, and 96% of the intervals observed.

As shown above, self-monitoring interventions are an easy-to-implement, time-efficient way to effectively increase on-task behavior in the classroom. The intervention can be used with students who have been diagnosed with ADHD, are currently receiving pharmacological treatment, or who are displaying high rates of off-task behavior for various other reasons. The intervention is also very flexible in that a teacher can adjust the way it is conducted to fit a particular child or classroom environment. One adjustment that can be made is in the way that a student is prompted to self-monitor. A student can self-record when the thought occurs to them or they can receive a prompt from a clock or a beep-tape. Another alternative is to use a tactile prompt such as the MotivAider.

The MotivAider

The MotivAider is a small battery powered electronic device that can be attached to a student's waistband or placed in their pocket. The purpose of the MotivAider is to enable a student to make desired changes in their behavior by providing a prompt in the form of a small vibration as a reminder to engage in the desired behavior (Levison, Kopari, Fredstrom, 2011). One feature of the device that sets it apart from the majority of other clocks and personal timers available on the market today is that it can be set to silently vibrate at regular intervals, or it can be set to vibrate at random intervals as a tactile prompt. The vibration prompt can be set to last from 1 to 5 seconds as a steady vibration or as several quick vibrations. The vibration prompts can also be set as frequently as every few seconds or as far apart as every 24 hours. The intensity of the vibration may also be adjusted (Levison & Young, 2008).

The MotivAider has received positive reviews from parents and professionals concerning the usage, effects, and acceptability of using the device with children who have been diagnosed with ADHD and Autsim Spectrum Disorders (Marner, 2010; Okano, 2009). In addition to students who display difficult behaviors, wearing the device as a reminder to provide frequent positive feedback has been recommended to parents and teachers (Choi, 2012; Barkley, 1993). In a review of the various usages of the MotivAider by Flaute, Peterson, Norman, Riffle and Eakins (2005) it was noted that "The MotivAider can help keep students focused on a task, reduce 'nagging' from a teacher, and eliminate the need for constant reminders to the student to stay engaged" (p. 3).

In a manual co-authored by the creator of the MotivAider entitled *Helping Kids Change Their Own Behavior: The Helpers Guide to the MotivAider Method* (Levison, Kopari, & Fredstrom, 2011), several benefits to using the MotivAider as a tool to help children increase positive behaviors are proposed. First, because a child who wears the MotivAider experiences the behavioral prompts on their own, they may feel personally responsible for the successes that they achieve. Second, the reminders that a child receives from the device are consistent, whereas teachers or aides may forget to give a prompt until a child is already off-track. Finally, the MotivAider is not very noticeable and the prompts that it gives are only detectable to the student wearing it. This helps prevent any negative peer reactions.

The use of the MotivAider as a prompt to self-monitor is less intrusive and perhaps more practical for use in a classroom setting than the use of traditional beep-tapes or verbal prompts (Amato-Zech, Hoff, & Doepke, 2006). Recent studies have effectively used the MotivAider as part of self-monitoring interventions that have

increased on-task behavior (Amato-Zech et al., 2006; Legge, DeBar, & Alber-Morgan, 2010; Vance, Gresham & Dart, 2012) as well as academic performance (Johnson, 2007). Using the MotivAider as a prompt to self-monitor may also increase the effectiveness of self-monitoring interventions (Dodson, 2008).

Self-Monitoring Using the MotivAider

Amato-Zech, Hoff, and Doepke (2006) used the MotivAider as a prompt to self-monitor in order to increase on-task behavior in 3 fifth-grade students in a special education classroom. As part of the intervention, the participants were trained to self-monitor their on-task behavior during two group sessions and two practice sessions in the classroom. The self-monitoring intervention was conducted while the students participated in reasoning and writing instruction. The MotivAider was set to vibrate at 1-minute fixed intervals during the first part of the study and was later adjusted to 3-minute fixed intervals for the remainder of the study. Each time the MotivAider vibrated, the participants marked whether or not they were paying attention at that time by checking "yes, I was paying attention" or "no, I was not paying attention" on a self-monitoring form. The results of this study indicate that at baseline the participants in this study were on-task for 55% of the intervals observed. During the intervention phase, the participants' mean rate of on-task behavior steadily increased to more than 90% of the intervals observed. The intervention received high acceptability rating for effectiveness and ease of use by both teachers and participants involved in the study.

Legge, DeBar, and Alber-Morgan (2010) examined the effectiveness of self-monitoring with a MotivAider to increase the on-task behavior of 3 boys in the fifth and

sixth grades. Two of the boys had a diagnosis of autism. The other boy had a primary diagnosis of cerebral palsy, but also displayed behaviors associated with autism. After an initial training session, each participant was provided with a MotivAider, which was set to prompt at a 2-minute fixed interval. Each participant was also provided with a self-monitoring sheet. Each time the MotivAider vibrated, the participants wrote either a plus (+) or a minus (-) on the sheet depending on whether or not he judged himself to be on-task. Each self-monitoring session lasted 20 minutes and took place in a special education classroom while the participants completed independent math assignments.

Each of the 3 participants in the study showed immediate increases in on-task behavior upon initiation of the intervention. During the baseline phase of the study, the participants' mean rate on-task behavior were 26%, 53%, and 77%, respectively. After being trained with the MotivAider as a prompt to self-monitor, all 3 participants showed immediate gains in their rates of on-task behavior. During the treatment phase, the participant's mean rate of on-task behavior increased to 91%, 98%, and 97% of the intervals observed. In addition, all 3 participants continued to display 80% to 100% on-task behavior during maintenance probes collected each week for 3 weeks following their last self-monitoring session. During the maintenance probes, the self-monitoring materials were not used.

Acceptability of Using the MotivAider in the Classroom

As shown above, the MotivAider can be an effective tool to use as a prompt to self-monitor. It is easy to work and can be used by students who have various behavioral disorders or who simply display high rates of off-task behavior. The device itself is small

and the vibration prompt can be adjusted to the liking of the student who wears it. The vibration prompt used by the MotivAider is only noticeable to the student wearing it and does not disturb the rest of the class. The prompts can be set at random intervals and are easy to adjust during an intervention.

Studies that have used the MotivAider as a tactile prompt for students in the classroom have reported positive acceptability ratings from both teachers and students (Amato-Zech et al., 2006; Christensen, Young, & Marchant, 2004; King, 2012). As reported earlier, Amato-Zech et al. used the MotivAider as a tactile prompt to self-monitor. Acceptability ratings from the teachers involved in the study indicated that they felt the intervention was easy to implement and that they would use the intervention again for a similar problems. Acceptability ratings from the students involved in the study indicated that they viewed the MotivAider as a tool to help them stay on-task, did not feel the intervention was intrusive, and enjoyed wearing the device.

King (2012) reported similar acceptability ratings from both students and teachers concerning the use of the MotivAider as a tactile prompt for students who displayed high levels of off-task behavior in the classroom. When asked what they liked about the intervention package that was used in the study, one teacher commented that the MotivAider was "quiet and easy to store" (p. 65). Another teacher noted that the use of the device "was not noticeable or a distraction to other students" (p. 65). One student involved in the study wrote that they liked it when the MotivAider buzzed because "it helps me to study" (p. 68). Another student noted that they liked using the MotivAider because it helped them to "stay on-task and focused" (p. 68).

Self-Monitoring of Attention versus Self-Monitoring of Performance

Two types of self-monitoring commonly appear in the research. The first is self-monitoring of attention (SMA) in which a student assesses whether or not he or she is on-task and then self-records the results when prompted (Reid, 1996). The second is referred to as self-monitoring of performance (SMP) in which a student monitors some aspect of his or her own academic performance and then self-records the results (Reid, 1996). Research in the area of self-monitoring indicates that both SMA and SMP can be equally effective in increasing rates of on-task behavior (Bruce, Lloyd, & Kennedy, 2012; Reid, 1996). However, studies have yielded mixed results concerning which method is most effective in enhancing academic achievement. Some research results indicate that SMP leads to greater benefit (Lam, Cole, Shapiro, & Bambara, 1994; Maag, Reid & DiGangi, 1993) while other studies give a slight edge to SMA (Harris, Friedlander, Saddler, Frizzelle, & Graham, 2005; Lloyd, Bateman, Landrum, & Hallahan, 1989).

In an attempt to determine which type of self-monitoring results in the most benefit, Bruce, Lloyd, and Kennedy (2012) conducted a review of 11 studies that compared the effectiveness of both SMA and SMP that met their criteria. The results of the review indicated that in addition to on-task behavior, SMA and SMP both were both shown to increase student accuracy and productivity. The authors concluded that based on their results, it was hard to argue that one procedure was superior to the other. Because of this, the authors suggest that there may not be one "right-and-true target" for self-monitoring. Instead, Bruce et al. note that based on the mixed results of previous studies, "it may be that self-monitoring is a good component of broader interventions" (p. 16) and

that when self-monitoring is used by itself, school professionals may plan to focus on multiple target behaviors.

Self –Modeling

Dowrick (2012) noted that video self-modeling "is a form of observational learning with the distinction that the observed and the observer, object, and subject, are the same person (p. 31)." As part of a self-modeling intervention, an individual observes images of himself or herself engaged in a desired target behavior. These images are commonly captured on video, edited into short vignettes displaying only targeted behavior, and then repeatedly viewed by the participant in order to learn skills or to adjust to new environments (Collier-Meek, Fallon, Johnson, Sanetti & Delcampo, 2012). The vignettes created for use in a self-modeling intervention provide a student with information and feedback as to what behavior is expected and what will happen if he or she engages in the target behavior (Davis, 1979). In order to increase the efficacy of self-modeling, it has been suggested that the practitioner should add verbal prompting or coaching during the self-modeling intervention (Clark, Kehle, Jenson, & Beck, 1992). The effect that video self-modeling has on helping a student to develop a desired target behavior is usually immediate, making the intervention time and cost effective. Furthermore, self-modeling studies conducted in the school environment have shown strong evidence that the effects of the self-modeling interventions are maintained over time and generalize across environments (Hitchcock, Dowrick, & Prater, 2003).

Vygotsky (1978) indicated that learning is most effective when done within the zone of proximal development, which is when the level of skill to be learned is just

beyond current performance. In a self-modeling intervention, video vignettes can be edited in such as way as to show a learner performing at a higher level than they have previously attained. In other words, the edited vignettes can teach skills within learner's zone of proximal development. This type of self-modeling has been termed "feedforward" self-modeling (Dowrick, 1999). Video feedforward techniques have been shown to be an effective technique in the acquisition of physical skills, social skills, reading skills, and classroom behavior (Dowrick, Kim-Rupnow, & Power, 2006).

Feedforward video self-modeling provides a student with video evidence that he or she can succeed. Buggey (2007) suggests that children who are having difficulty with a task could benefit form the "prestige and confidence" that comes from watching their own successes in a video format. A benefit of a student seeing their self successfully performing a targeted skill is that it promotes a sense of self-efficacy, or the sense that he or she can succeed (Bandura, 1997). In fact, developing a sense of self-efficacy is a core facet and benefit of self-modeling techniques (Buggey, 2007). When children observe themselves doing well, it increases their self-efficacy for further learning and leads them to increase their efforts and persist in the targeted task (Schunk & Hanson, 1989).

An increasing number of studies are examining the effectiveness of self-modeling (Buggey & Ogle, 2012) and the intervention has been repeatedly verified as an effective strategy that can be applied to a wide spectrum of academic needs, behaviors, and conditions (Bilias-Lolis, Chafouleas, Kehle & Bray, 2012; Kehle, Bray, Byer-Alcorace, Theodore & Kovac, 2012; Madaus & Ruberto, 2012; Prater, Carter, Hitchcock, Dowrick, 2012). In a review of approximately 150 studies that employed self-modeling, Dowrick (1999) identified seven categories of application where self-modeling had been used with

positive results. These categories include increasing adaptive behavior currently intermixed with nondesired behaviors, transfer of setting-specific behavior to other environments, use of hidden support for disorders that may be anxiety based, improved image for mood-based disorders, recombining component skills, transferring role-play to the real world, and reengagement of a disused or low-frequency skills. Recent studies have also found that self-modeling is an effective procedure for addressing social-communication skills, functional skills, and behavioral functioning in children and adolescents with autism spectrum disorders (Bellini & Akullian, 2007; Bellini, Akullian, & Hopf, 2007).

A growing percentage of studies are examining the use of video self-modeling in the school setting. Hitchcock, Dowrick, and Prater (2003) conducted a review of 18 such studies that met their strict criteria. The review included studies that identified dependent variables in the areas of disruptive behavior, compliant classroom behavior, language responses, peer relationships, adaptive behavior, math skills, and reading fluency. Each of the studies included in the review demonstrated moderate to strong outcomes. It was further indicated the results obtained in the school-based self-modeling studies demonstrated a high level of maintenance and generalization.

More specifically, self-modeling has been shown to be an effective procedure to increase on-task behavior in students who display elevated levels of disruptive behavior in the classroom. In a study conducted by Kehle, Clark, Jenson, and Wampold (1986), 4 children ages 10 to 13 in a special education classroom who exhibited high rates of off-task and disruptive behavior were selected to receive a self-modeling intervention. In order to conduct the intervention, each student was video recorded while participating in

regular classroom activities for approximately 25-30 minutes. The video recording for each participant was then edited into an 11-minute tape that only showed the participant displaying appropriate classroom behavior.

Prior to receiving the intervention, the mean rate of off-task behavior exhibited by the participants in the study averaged 47%. During the intervention, 3 of the participants were simply shown their tapes once a day for 5 days. As a result of the self-modeling intervention, their rates of off-task behavior were reduced to only 11%, which represents a significant decrease in their rates of off-task behavior. The fourth participant in this study served as a control and watched an unedited videotape during the intervention phase. When the fourth participant was shown the unedited video, the participant's rates of off-task behavior actually increased. At the end of the study, the control subject was shown his edited video twice, at which time his rate of off-task behavior was observed to be within range of the other participants at 14%. Follow-up data were collected after 6 weeks, at which time it was observed that the treatment gains were maintained.

Possell, Kehle, McLoughlin, and Bray (1999) conducted a self-modeling intervention to decrease rates of disruptive classroom behavior in both the regular education and special education classrooms. Participants in the study included 4 male students ages 5 to 8 years old. Each of the participants met public law 94-142 criteria for social emotional disturbance. Two of the participants received their academic instruction in a general education classroom and the other 2 participants were in a self-contained special education classroom.

During the baseline phase of the study, the participants were videotaped on three or more occasions for approximately 30 to 45 minutes. The videotape was then edited to

create two, 5-minute self-modeling videotapes that only depicted appropriate classroom behaviors. As part of the intervention, the two self-modeling videotapes were viewed, in a random order, on at least six occasions over a period of 2 weeks. During each intervention session, the researcher was present. Using a predetermined script, the participants were informed that they would be watching a video of their classroom behavior in the school psychologist's office. No other explanation was given with the exception that if a participant looked away from the television, he was prompted to attend to the video recording.

After viewing the self-modeling video recordings, participants displayed a reduction in disruptive behavior. At baseline, the participants displayed disruptive behavior in approximately 60% of the intervals observed. During the self-modeling intervention, their rate of disruptive behavior decreased to a mean of about 40% of the intervals observed. Follow-up data were collected immediately after the cessation of the intervention phase and at the end of 6 weeks following the intervention phase. Follow-up data demonstrated that the participants' rates of disruptive behavior remained lower than baseline rates at approximately 43% of the intervals observed.

Clare, Jenson, Kehle, and Bray (2000) conducted a self-modeling intervention to increase rates of on-task behavior using five self-modeling videos viewed at random, four times a week, over a 3-week period. The participants included in the study were 3 male students in a special education classroom, aged 9 to 11. At the onset of the study, the participants were observed to be on-task an average of 30% of the intervals observed.

In order to create the self-as-a-model videotapes, each student was videotaped while participating in independent seatwork activities. The videotapes were then edited to

create five videos that were approximately 5 minutes in length for each student. The videos were edited to depict each student engaged in class work and displaying appropriate on-task behavior. The use of multiple videos was designed so that each participant only watched each video twice over a 3-week treatment condition. The videos were viewed one-on-one with the researcher. A conversational protocol was used which began with an initial prompt to watch the entire video and also reminded the student to attend to the video when needed.

The treatment effects for each student were not only immediate, but also significant. The mean on-task rates for the intervals observed during the intervention for all 3 participants increased to 86%. Data collected at 6 and 8 weeks follow-up indicated that the treatment effects were maintained. Consumer satisfaction data collected at the end of the study indicated that both the participants and their teachers were satisfied with the procedures used.

Peer-Modeling

Video peer-modeling interventions are similar to those used in self-modeling described in the previous sections with the exception that the video vignettes that are produced and then viewed consist of recordings of a student's peers appropriately displaying the desired behaviors. Peer-modeling interventions that follow a similar procedure as self-modeling interventions can be equally effective in increasing on-task behaviors in the classroom (Clare, 1992) and can be used with a single student (Richards, 2002) or and entire classroom (Richards, Tuesday-Heathfield, & Jenson, 2010). Furthermore, peer-modeling procedures have yielded positive results across all age

groups (Mason, Ganz, Parker, Burke & Camargo, 2012) and have been shown to be effective in modifying affective behavior (Gena, Couloura, Kymissis, 2005), increasing peer interaction, and decreasing inappropriate behaviors (Baker, Lang, O'Reilly, 2009). An increasing number of studies also support the use of peer-modeling procedures for addressing social-communication, functional skills, and behavioral functioning in children with autism spectrum disorders (Bellini & Akullian, 2007; Delano, 2007).

Peer-models have a great potential for modifying behaviors in children (Hartup & Lougee, 1975). Bandura's Social Learning Theory (1977) indicates that human behaviors are primarily learned by observing others and then modeling their actions. Students gain a significant amount of information about their own capabilities from knowledge about how others perform. Observing others succeed conveys a message to an observing student that he or she is capable and can motivate them to attempt a task (Schunk, 1991). Observing models of the same gender, age, and whom students view as being similar in competence may help increase the effectiveness of peer-modeling and helps promote a sense of self-efficacy for learning target skills (Schunk, Hanson, & Cox, 1987).

The use of more than one model for a targeted behavior can be beneficial. Multiple peer-models increase the probability that the observer will perceive themselves as similar to at least one of the models and therefore capable of learning or performing a target behavior. This perceived similarity is enhanced when the peer-models that are used are similar in gender and age to the observer. Furthermore, the use of multiple models decreases the likelihood that the observer can discount the successful behaviors of a single peer (Schunk, 1987).

Video-modeling procedures have been shown to be just as effective as using in vivo models (Geiger, LeBlanc, Dillon, & Bates, 2010; Wang, Cui, & Parrila, 2011) and in some cases more effective (Charlop-Christy, Le, & Freeman, 2000). Video-modeling has also been shown to be more time and cost efficient than using in vivo models (Charlop-Christy et al., 2000). Thelen, Fry, Fehrenbach, and Frautschi (1979) discussed several of the advantages of using video-modeling over in vivo models. First, video recordings can be produced in a variety of naturalistic settings that would be difficult to recreate in vivo in a clinic or classroom setting. Second, the therapist or school professional has greater control over the modeling scene because video recordings can be edited until a desirable scene is produced. Third, video recordings permit the convenient use of multiple models and repeated observations of the same models because the actual models do no have to be present. Finally, multiple students may view the same peer-model video recordings.

Richards (2002) studied the effectiveness of a video peer-modeling intervention to increase on-task behavior in the classroom. The study included 3 male students in the fourth and fifth grades who displayed high rates of off-task behavior in the classroom. As part of the intervention, a peer-model video was created. The video contained eight video segments that were about 5 minutes in length. Each segment showed a different peer-model displaying appropriate on-task behaviors while engaged in an academic task. The peer-models were approximately the same age as the participants in the study and were chosen to include a variety of physical appearances. The same videotape was shown to each of the 3 participants. As part of the intervention, the participants viewed one video segment each day over a 2-week period. Each video session was conducted one-on-one

with the researcher. During the video session, comments were made by the researcher directing the participants to attend to specific examples of on-task behavior that were being demonstrated on the video. They were also encouraged to display those same behaviors in the classroom.

Using this method, significant gains in on-task behavior were achieved for each of the 3 participants. The mean baseline on-task rate for the participants was observed to be 40% of the intervals observed. During the intervention, that rate was improved to 65%. Follow-up data at 2 and 4 weeks showed continued improvement with a mean on-task rate of 76% percent for all 3 participants.

Richards, Tuesday-Heathfield, and Jenson (2010) examined the effectiveness of a class-wide peer-modeling intervention package to increase on-task behavior. In this study, the peer-modeling intervention took place in three different classrooms ranging from the third to sixth grade. The classes were made up of boys and girls and contained 14 to 20 students each. As part of the study, a videotape of students in the third through sixth grade was produced for use in the peer-modeling intervention. The models that were chosen consisted of both boys and girls with a variety of physical characteristics. Each model was videotaped doing simulated schoolwork in a classroom setting for approximately 4 minutes with near 100% rate of on-task behavior. In total, 14 different peer-modeling video segments were created.

The intervention sessions were conducted in each respective classroom twice a week for a total of six to eight sessions. Each session was approximately 15 minutes in length. At the beginning of each session, the researcher encouraged the class to attend to the peer-modeling video after which the video was shown to the class. While the class

was watching the video, the researcher made coaching statements regarding the on-task behavior that was being modeled on the video approximately every 30 seconds. Following the video segment, specific skills related to on-task behavior were discussed and then the participants in the class were asked to try to imitate the behaviors demonstrated by the peer model shown in the video.

The class-wide peer-modeling intervention proved to be effective in increasing on-task behavior. All three classes demonstrated gains in the mean number of students on-task during the intervention. At baseline, the mean number of students that were on-task for the three classes that participated in the study ranged from 69% to 73%. During the intervention, the number of students observed to be on-task in these classrooms increased and the percentage of students that were on-task ranged from 75% to 85%. During the follow-up phase of the study at 4 and 8 weeks following the intervention, the mean percentage of students on-task in each classroom continued to be higher that the percentage recorded at baseline.

Combining Modeling Procedures with Self-Monitoring

Modeling procedures have been successfully combined with self-monitoring to decrease rates of off-task behavior in the classroom (Clare, 1992; Coyle & Cole, 2004; King, 2012). Clare (1992) conducted a study in which self and peer-modeling procedures were combined with a self-monitoring intervention in order to increase on-task behavior. The study included 6 male participants in the fourth through sixth grades who were receiving special education services. Each of the participants selected for the study demonstrated elevated levels of off-task behavior in their respective classrooms. During

the study, 3 of the participants received a peer-as-a-model intervention and the other 3 participants received a self-as-a-model intervention. Each of the self and peer-modeling videos was approximately 5 minutes in length and showed either the participant or a peer-model displaying appropriate on-task behavior while doing independent seatwork. Each intervention session was conducted one-on-one with the researcher and only one video segment was viewed during each intervention session. Coaching statements focused on directing the participants' attention to the on-task behaviors that were being modeling were made by the researcher throughout each video session.

After receiving 10 sessions of the self or peer-modeling intervention, a self-monitoring intervention was added to both conditions. As part of this intervention, each subject was trained on how to self-monitor their on and off-task behaviors in the classroom. During the training, the researcher defined the on-task and off-task behaviors that were to be tracked. Then the participant practiced rating on-task and off-task behaviors using a self-monitoring grid together with the researcher while watching a watching a practice video of a student prepared for training purposes. The self-monitoring grid contained 20 boxes for marking intervals. After the training session, the participants used the self-monitoring grid in the classroom. They were instructed to use all 20 boxes on their grid to self-monitor their behavior during their next independent seatwork activity. No signaling device was used. The participants simply marked their grids whenever they thought of it. No rewards for accuracy or improved on-task behavior in the classroom were provided. Each participant participated in the self-monitoring intervention in combination with either the self-modeling or peer-modeling intervention for a total of 5 treatment days.

The results of using this intervention package indicated immediate, large, and durable increases in on-task behavior for all subjects across conditions. At baseline, the three subjects in the peer-as-a-model condition were found to be on-task an average of 32% of the intervals observed. During the peer-modeling intervention, their on-task behavior increased to 88% of the intervals observed. The rate of on-task behavior for the 3 participants in the self-as-a-model condition were found to be on-task an average of 33% of the intervals observed during baseline. Their average rose to 86% of the intervals observed during the self-modeling intervention. When self-monitoring was added to the intervention package of the study, the average rate of on-task behavior for participants in each condition increased slightly to about 90% of the intervals observed. Follow-up observations at 6 and 8 weeks indicated that the participants' maintained on-task behavior far superior to their baseline rates.

King (2012) conducted a study in which self-modeling, peer-modeling, and self-monitoring procedures were used as part of a package intervention in order to increase on-task behavior. The study included 3 male participants and 1 female participant who were in the second and third grades. Each of the participants selected for the study demonstrated elevated levels of off-task behavior in their respective classrooms. The self-monitoring procedures were conducted while the participant's were engaged in independent seatwork in math. Two of the participants received their math instruction in a special education classroom and 2 of the participants received their math instruction in their regular education classrooms.

Self-modeling videos featuring the 4 participants involved in the study were created as part of the intervention package. These recordings were created during the

baseline phase of the study. In order to make these videos, a camera was brought into each participant's respective classroom and placed in the least obtrusive location possible. Each participant was recorded on two separate occasions while doing independent seatwork in math. On each occasion, the participant was continuously video recorded until it was estimated that approximately 5 minutes of on-task behavior had been recorded. From this footage, two 5-minute self-modeling videos were created for each participant. The videos were edited to reflect only the instances when the participant was on-task and demonstrated appropriate classroom behavior.

A peer-model video was also created. The video depicted male and female peer-models in the third grade working independently on math assignments. The peer-models were recorded while engaged in independent math assignment for approximately 5 minutes with near 100% on-task rate. The peer-model video contained 14 different peer-model clips. Seven of the clips portrayed female peer-models and seven of the clips portrayed male peer-models.

Before entering the intervention phase, each participant was required to demonstrate the proper use of the MotivAider in conjunction with a self-monitoring form. To this end, a training video was created for the purpose of teaching the participants involved in the study how to correctly use the MotivAider in combination with the self-monitoring form. During this video, a peer-model was shown demonstrating the appropriate procedure for using the MotivAider and correctly recording their behaviors on the self-monitoring form. Several examples of what constituted on-task and off-task behavior were also demonstrated. Each participant watched this video and then practiced using the MotivAider together with the self-monitoring form.

During the intervention phase, each participant was involved in a self-monitoring intervention while they worked on their independent math assignments. During this time, the participants utilized the MotivAider together with a self-monitoring form. The participants were given the choice to wear the MotivAider on the waist of their pants or to place the device in their pocket. The MotivAider was set to vibrate at random intervals within a mean of 60 seconds. Each time the prompt vibrated, the participant evaluated whether or not they were on-task at that time and marked it on a form. There was no reinforcement or consequence connected with the rate of on or off-task behavior indicated on the chart by the participants. The self-monitoring materials were dispensed and collected by the participant's respective classroom teachers.

Each participant was also involved in a self- and peer-model intervention during the intervention phase. Each session of the self- and peer-modeling interventions was conducted in a standardized format. The sessions were approximately 10 to12 minutes in total length with the video viewing taking up about 5 minutes of each session. The participants watched a recording of a peer-model twice and their own self-modeling video twice at random for a total of four modeling sessions during each full week of the intervention. Frequent verbal coaching statements from the researcher to the participants were made before, during, and after viewing the self- and peer-model videos. During the video, the researcher made comments focused on helping the participant to attend to specific on-task behaviors exhibited in the video approximately every 30 seconds. When the video was finished, the examiner made one or two ending statements that encouraged the participant to display the behaviors that were modeled in the video in their own classroom.

The study results showed that the package intervention led to significant improvements in on-task behavior in each of the 4 participants. The mean baseline rate of on-task behavior for the participants in the study was observed to be 47%. During the intervention phase, the mean rate of on-task behavior displayed by the participants rose to 85%. The study results also indicated that the improved rates of on-task behavior displayed by each participant were maintained at 3-weeks postintervention. Participation in the intervention package received high acceptability ratings from both teachers and participants. Additionally, teacher report concerning the intervention package indicated that they believed that the participants' academic performance had improved during the course of the intervention. However, the researcher was not able to effectively confirm whether or not the participants' academic abilities had in fact increased during the intervention.

As shown above, self-monitoring and video-modeling techniques have been shown to be effective interventions for increasing rates of on-task behavior in students that display high rates of off-task behavior. The techniques are time and cost efficient as well as easy to implement. These interventions also receive positive reviews from both teachers and students, which make them a great choice for use in the school setting.

On-Task in a Box

On-Task in a Box (Jenson & Sprick, in press) is an evidence-based manualized intervention system that can be implemented by school professionals such as teachers, school psychologists, and behavior specialists. The aim of the package intervention is to increase student's on-task behavior and academic achievement in the classroom (Jenson

& Sprick, in press). The primary interventions that are used in the program include self-monitoring using the MotivAider as well as peer-modeling. Self-modeling is an optional component of the program. The program also includes motivation systems to keep students excited about participation in the intervention. The motivation systems include Reward Spinners, a Reward Menu, and Mystery Motivators (Jenson, Rhode, & Reavis, 1995).

The program is pre-assembled, which means that all of the materials that are needed to implement the program can be found in the box. The intervention package includes a manual, a CD-ROM with all printable forms such as Self-Plotting graphs, an animated DVD to teach self-recording, peer modeling DVDs, and a MotivAider. The intervention package can be implemented with an individual student in an office setting, with two students working together, or with a whole classroom.

Purpose of the Study

Off-task behaviors such as not remaining seated, talking out, not working, and acting out are among some of the most frequently reported problematic behaviors that occur in the classroom (Bowen, Jenson, & Clark, 2004). The prevalence of students with these types of behavioral tendencies in the classroom is increasing and many teachers can identify multiple students in each of their classes who exhibit high rates of off-task behaviors (Bowen et al., 2004). In fact, an increasing number of today's students meet criteria for a recognized mental disorder and many such students have more than one disorder (Walker, 2004). Because a student's ability to be academically successful is related to their ability to attend in the classroom (Ducharme & Shector, 2011), it is

essential that school professionals implement quality research-based interventions designed to help these students manage their behavior. Self-monitoring and video-modeling interventions have been shown to be effective procedures for decreasing off-task behavior. However, it can be difficult and time consuming for school professionals to assemble all of the information and materials needed to implement them. With the increasing demands placed on educators (Walker, 2004), time has become an increasingly valuable commodity in the classroom. Because of this, it comes as no surprise that teachers are more likely to use interventions that are not only effective for treating a target behavior, but time efficient as well (Elliot, 1988).

The On-Task in a Box package intervention uses techniques that have been proven to be effective in increasing rates of on-task behaviors in students (Clare, 1992; King, 2012). The program saves the user a lot of time by providing all of the necessary materials and guidelines needed to effectively run the program. The program also promotes academic achievement, can be used by existing school staff, and is not overly burdensome. All of these are factors that lead school professionals to choose and ultimately implement an intervention program (Dingfelder & Mandell, 2011); however, the effectiveness and acceptability of the On-Task in a Box program has yet to be studied. Therefore, the purpose of this study is to be the first to evaluate the acceptability and effectiveness of the On-Task in a Box program for increasing rates of on-task behavior and enhancing academic achievement.

Research Hypotheses

1. Rates of on-task behavior will be higher than baseline on-task rates after receiving the package intervention as measured by direct observation and effect size.
    - Response Discrepancy Observation
2. On-task rates will remain improved above baseline on-task rates at follow-up observations at 3 weeks postintervention as measured by direct observation.
    - Response Discrepancy Observation
3. Teachers will report positive ratings on the Intervention Rating Scale and indicate that during the intervention an improvement was apparent in the participants' on-task behavior as measured by mean responses on a six-point Likert scale.
    - Intervention Rating Scale
4. Classroom teachers will report positive ratings on The Intervention Rating Scale regarding participation in the intervention as measured by mean responses on a six-point Likert scale.
    - Intervention Rating Scale
5. Participants will report positive ratings on the modified Children's Intervention Rating Scale regarding participation in the intervention as measured by mean responses on a six-point Likert scale.
    - The Children's Intervention Rating Scale
6. The participants will indicate that the intervention sessions that they took part in were enjoyable and beneficial to them as measured by their mean responses on the Fun 'O' Meter.
    - Fun 'O' Meter

7. The participants' academic accuracy and completion of problems on curriculum-based math worksheets will increase above baseline rates while they are participating in the intervention as measured by mean number of items completed and mean number of items solved correctly.
    - Curriculum-Based Math Worksheets

METHODS

Participants

Three participants were selected for participation in each of the two sites involved in the study for a total of 6 participants. The participant pool consisted of 1 female and 5 male students. Two of the participants were in the second grade and 4 of the participants were in the third grade. Two of the participants were receiving special education services at the time of this study; however, all self-monitoring sessions and observations were conducted in the regular education classroom. For the purposes of this study, the participants will be referred to as Participants 1 through 6. Participants 1, 2 and 3 attended school at Site 1. Participants 4, 5, and 6 attended school at Site 2.

Site 1

Participant 1 was in the second grade and was the only female participant in the study. She received her math instruction in a regular education classroom. On the Child Information Questionnaire, her parents did not indicate that she had ever been diagnosed with any learning or attention problems. (See Appendix B for a copy of the Child Information Questionnaire.) It was also indicated that she was not taking any medication at the time of the study.

Participant 2 was in the third grade. He also received his math instruction in a regular education classroom. His parents did not indicate the presence of any previous diagnosis on the Child Information Questionnaire. His parents also did not indicate that he was taking any medication at the time of the study.

Participant 3 was also in the third grade. He received his math instruction in a regular education classroom. On the Child Information Questionnaire, his parents indicated that he had been previously diagnosed with ADHD and autism. It was also noted that he was taking dextroamphetamine and Zoloft in order to treat the symptoms associated with the disorders. Although his parents report that he had been diagnosed with these disorders, at the time of the study, he was not receiving any special education services.

Site 2

Participant 4 was in the third grade and was in the same regular education classroom as Participant 6. At the time of this study, he was receiving special educational services in the area of math under the classification of Specific Learning Disability. Each day, he received two sessions of math instruction, one while in a special education classroom and one while in his regular education classroom. The participant only used the self-monitoring intervention that is part of the On-Task in a Box program while in his regular education classroom. On-task observations were also only conducted for Participant 4 while he was in his general education classroom. On the Child Information Questionnaire, it was indicated that he did not have any previous diagnoses and that he was not taking any medication at the time of the study.

Participant 5 was in the second grade. He received his math instruction in a Spanish dual immersion regular education classroom; however, his native language was English. All instructions associated with the On-Task in a Box intervention were given to the participant in English. On the Child Information Questionnaire, his parents did not indicate that he had ever been diagnosed with any learning or attention problems. It was also indicated that he was not taking any medication at the time of the study.

Participant 6 was in the third grade and was in the same regular education classroom as Participant 4. He received his math instruction in the regular education classroom; however, he was receiving special educational services under the classification of Specific Learning Disability in the areas of reading and writing at the time of the study. On the Child Information Questionnaire, it was indicated that he did not have any previous diagnoses and that he was not taking any medication.

Setting

The study was conducted in two elementary schools in a suburban school district in the Intermountain West. Both schools were regular education public schools, which also offered special education classes in the areas of reading, writing, and math. Both schools involved in this study qualified to receive Title 1 funding. The schools followed a traditional schedule and housed students from kindergarten through sixth grade. For the purposes of this study, the two schools will be labeled as Site 1 and Site 2, respectively. The researcher who was also a school psychologist implemented the On-Task in a Box program at Site 1. A volunteer school psychologist implemented the program at Site 2.

Throughout each phase of the study, the various components of the intervention package were only conducted on Monday through Thursday of each week.

An empty teacher workroom was used to conduct the peer-modeling intervention at Site 1 and an empty office was used at Site 2. Two chairs and a table were set up at each site to accommodate the researcher and the individual participants. All of the videos that were shown to the participants were viewed on a MacBook Pro 8,1 laptop computer with a 13' inch screen, which was set on the table directly in front of the participants. One laptop computer was available for use at each site. The self-monitoring intervention component took place in each participant's respective regular education classroom during independent math seatwork time. All on-task observations were also conducted in the participants' respective regular education classrooms. The observations were 15 minutes in length and were only conducted while the participants were engaged in independent math seatwork.

Research Design

A yoked multiple-baseline, multiple-probe design (Cuvo, 1979; Horner & Baer, 1978) was used to evaluate the effectiveness of the On-Task in a Box program for each set of participants in the two schools involved in the study. A multiple probe design allows a researcher to use intermittent probes to evaluate the effectiveness of an intervention when continuous data measurement proves impractical or unnecessary (Horner & Baer, 1978). The use of a multiple probe technique helps control for threats to internal validity (Horner & Baer, 1978).

At the beginning of the study, three baseline probes were taken for each participant. Throughout the remainder of the study, probes were always taken immediately before and after a participant enters the intervention phase. The remaining probes were collected during both the baseline and intervention phases using a previously designed observation schedule until 12 total probes had been collected for each participant. Each observation was conducted in the participants' respective classrooms while they participated in independent math work. The exact number of these probes conducted for each participant during baseline and intervention will be explained later on in this chapter.

Dependent Measures

Multiple types of measures were used in order to analyze the effectiveness of the On-Task in a Box intervention package. The primary type of measure that was gathered were the on-task rates for each participant. Academic math worksheets completed during observation probes were also collected in order to assess the impact of the intervention package on academic performance. Consumer satisfaction feedback concerning the intervention package was also obtained via questionnaires from each participant and the teachers who provided math instruction for them.

On-Task Observations

On-task rates were gathered via direct observation. (See Appendix C for a copy of the observation form.) The on-task observations were conducted using a response discrepancy format with whole-interval recording. The observations took place in each

participant's classroom during a period when the participants were required to be doing independent math seatwork. The observers followed the behavioral observation format described in *The Tough Kid Tool Box* (Jenson et al., 1995). Each observation was 15 minutes in length and was divided into 90 10-second intervals. During each 10-second interval, the participants were observed along with a same-gender peer. In order to be counted as on-task for an interval, the participant had to be on-task for the entire 10-second interval. If the participant was off-task at any time during the 10-second interval the participant was marked as off-task for that interval. A participant was only counted as being off-task once during each interval. If more than one off-task behavior occurred, it was ignored until the next 10-second interval. The behaviors that were observed and their corresponding codes are taken from *The Tough Kid Tool Box* (Jenson et al., 1995, p. 213) and are as follows:

***** = *On-Task:* Eye contact with teacher or task and performing the requested task.

T = *Talking Out/Noise:* Inappropriate verbalization or making sounds with object, mouth, or body.

O = *Out of Seat:* Student fully or partially out of assigned seat without teacher permission.

I = *Inactive:* Student not engaged with assigned task and passively waiting, sitting, etc.

N = *Noncompliance:* Breaking a classroom rule or not following teacher directions within 15 seconds.

P = *Play with object:* Manipulating objects without teacher permission.

Academic Assignments

Throughout the duration of the study, each participant was provided with curriculum-based math worksheets generated from the Math Worksheet Generator located on www.interventioncentral.org. Each worksheet contained 60 individual math problems. (See Appendix G for a sample math worksheet.) The participants worked on these worksheets each time an on-task observation was conducted during the baseline, intervention, and follow-up stages of the study. The researcher provided these worksheets for each participant's respective teacher. Each classroom teacher handed the worksheets out to the participants at the beginning of each 15-minute on-task observation. At the end of each observation, the classroom teacher immediately collected the worksheets. A new worksheet was provided for the participants every time an observation was conducted. In order to make it possible to measure academic accuracy and completion of problems, the participants' teachers were asked to only have the participants work on these worksheets while the participant was being observed.

Treatment Integrity

In order to help maintain treatment integrity, checklists based on the steps described in the On-Task in a Box Manual (Jenson & Sprick, in press) were used throughout the study. Three different checklist forms were used. The program implementer at each site checked off the items on these lists as they were completed during each respective session.

Orientation Session Checklist. The Orientation Session Checklist provided the program implementer with the steps for conducting the initial orientation session with the

participants as outlined in the manual. (See Appendix H for a copy of the Orientation Session Checklist.) This form was only used during the initial orientation session.

Intervention Session Checklist. The Intervention Session Checklist provided the program implementer with the steps for conducting each video intervention session with the participants as prescribed in the manual. (See Appendix H for a copy of the Intervention Session Checklist.) A new form was used during each intervention session with each participant.

Teacher Follow-Up Checklist. The Teacher Follow-Up Checklist provided the program implementer with the steps for conducting the weekly follow-up sessions with each participant's teacher as indicated in the manual. (See Appendix H for a copy of the Teacher Follow-Up Checklist.) A new form used for each meeting.

Consumer Satisfaction

Intervention Rating Scale. A teacher questionnaire constructed by the researcher (King, 2012) was used in order to determine the degree to which the teacher of each participant either liked or disliked the intervention package. (See Appendix B for a copy of the Intervention Rating Scale.) The questionnaire consisted of 24 statements taken from the Behavior Intervention Rating Scale (Elliot & Trueting, 1991), which were rated on a six-point Likert scale that ranged from "strongly agree" to "strongly disagree." The questionnaire also contained four open-ended questions constructed by the researcher. These questions allowed each teacher to more specifically indicate their thoughts about participation in the intervention. The teacher of each participant completed the questionnaire on the last day of the intervention phase.

The Children's Intervention Rating Scale. A participant questionnaire constructed by the researcher (King, 2012) was used to determine how each participant felt about participation in the intervention. (See Appendix B for a copy of The Children's Intervention Rating Scale.) The questionnaire included seven items, which were rated on a six-point Likert scale that ranged from "strongly agree" to "strongly disagree." The seven items on the questionnaire were based on the items found on the Children's Intervention Rating Profile (Elliot, 1986). The questionnaire also contained four open-ended questions constructed by the researcher. These questions allowed each participant to more specifically indicate their thoughts about being involved in the intervention. In order to accommodate a younger population and to ensure that the participants fully understood each question, the questionnaire was given on a one-on-one basis to each participant by the program implementer at each site on the last day of the intervention phase. Each item was read aloud to the participants.

Fun 'O' Meter ratings. The Fun 'O' Meter is part of the On-Task In A Box intervention package. (See Appendix F for a copy of the Fun 'O' Meter.) After each intervention session, the participants evaluated the intervention session for helpfulness and fun by marking the Fun 'O' Meter. Ratings on the Fun 'O' Meter were used to determine how the participants felt about participation in the intervention after each individual session.

Materials

Observation Training Videos

Two previously made observation-training videos were used for the purpose of establishing interrater reliability between the observers. The videos were each approximately 15 minutes in length and were designed to resemble observing a regular third-grade classroom during independent seatwork time. Each video showed approximately 9 students in the third grade engaged in independent academic seatwork. During each video, the students were shown demonstrating typical classroom behaviors while working independently on math worksheets.

Math-Curriculum-Based Measurement Probe

Each participant completed a math-curriculum-based measurement (Math-CBM) probe before baseline data was collected (Math-CBM, available from www.aimsweb.com). The purpose of the probe was to aid the researcher and the teacher in choosing the appropriate math skill level for the curriculum-based math worksheets that would be presented to each participant throughout the study. The researcher or volunteer school psychologist explained how to administer the Math-CBM probe to the teacher of each participant. The classroom teacher then administered the probe to each participant at some point during the school day. The guidelines for the administration and scoring of the probes found in the AIMSweb Training Workbook (Shinn, 2004) were followed. Each participant was given 2 minutes to complete as many items on the probe as they could. If they did not know how to do a particular item, they were instructed to put and ‘X’ over it. After 2 minutes, the participant was instructed to put his or her pencil

down and the teacher collected the probe. Each probe contained 28 grade appropriate math items. Benchmark Grade 2, Probe 1 was administered to the participants who were in the second grade. Benchmark Grade 3, Probe 1 was administered to participants who were in the third grade. The researcher corrected each Math-CBM probe.

Curriculum-Based Math Worksheets

In order to help measure the effects of the intervention package on the participants' academic accuracy and completion of problems, curriculum-based math (M-CBM) worksheets were created using the Math Worksheet Generator located on www.interventioncentral.org. In order to match the level of difficulty of the math worksheets to each participants skill level, the researcher consulted with each participant's teacher. This consultation took place before baseline observations were conducted. During the consultation, the researcher and the teacher reviewed the results of the M-CBM probe. The appropriate skill and problem difficulty for the participant's math worksheet were then selected based on the probe results and the teacher's knowledge of the participant's ability. Fifteen different worksheets were generated for each participant based on the results of the consultation. Each worksheet consisted of two pages and contained 30 different math problems per page for a total of 60 items. (See Appendix G for an sample math worksheet.)

After reviewing the results of the M-CBM probes together with each participant's teacher, the difficulty level of the math worksheets that were selected for each participant are as follows:

Site 1. The researcher and teachers at Site 1 selected single-skill addition computation worksheets. Participant 1's math worksheets consisted of 1 to 2-digit numbers plus one to 2-digit numbers with no regrouping. Participant 2's math worksheets consisted of 4-digit numbers plus 4-digit numbers with regrouping in 1 to 3 columns. Participant 3's math worksheets consisted of 3-digit numbers plus 3-digit numbers with regrouping in the ones and tens columns.

Site 2. At Site 2, single-skill addition computation worksheets were also selected. Participant 4's math worksheets consisted of 2-digit numbers plus 2-digit numbers with regrouping. Participant 5's math worksheets consisted of 2-digit numbers plus 2 digit numbers with no regrouping. Participant 6's math worksheets consisted of 2-digit numbers plus 2-digit numbers with regrouping.

On-Task in a Box

The On-Task in a Box (Jenson & Sprick, in press) intervention package includes an instructional manual that explains how to implement and troubleshoot the program. A CD-ROM with printable self-recording forms, self-plotting graphs, and on-task observation forms are also included. Motivational interventions such as Mystery Motivators, Spinners, and a Fun'O'Meter to measure participant satisfaction are also provided.

Fasthands animation DVD. The On-Task in a Box program employs the use of a Fasthands animation DVD in order to teach participants how to self-monitor and keep track of their progress on a self-plotting graph. Fasthands animation teaches concepts through overhead recording of two hands drawing the definition of a concept through

cartoon characters and then speeding the video up approximately seven times. The use of Fasthands animation has been shown to aid students in learning the definition of skills and then to use those skills outside of the training environment (Block, 2010; Hood, 2011).

Peer-Model videos. The On-Task in a Box program uses peer-modeling videos as part of the intervention package. However, the peer-modeling videos included in the On-Task in a Box program were not yet published at the time when this study was conducted. Therefore, for the purposes of this study, two peer modeling DVDs previously made by the researcher were used.

The first video was created as part of a previous study conducted by the researcher (King, 2012). The video depicts male and female peer-model volunteers in the third grade working independently on math assignments in a classroom. Each clip is approximately 5 minutes long and the peer-models are shown working on independent math worksheets with near 100% on-task rate. The first peer-model video contains 14 different peer-model clips. Seven of the clips portray female peer-models and seven of the clips portray male peer-models. During each clip on the video, a peer model is shown seated between two other student volunteers. The camera is zoomed in on the peer-model so that the viewer can only see a small portion of the students on either side of the model. While making the video, the peer-model in each clip was instructed to stay focused on their assignment no matter what was happening around them. The two students on either side of the peer-model were then occasionally prompted to attempt to talk to the peer-model or the other student volunteer, walk by the peer-model's desk, tap their pencil on their desk, or cause other minor distractions. Other preplanned distractions that occur in

the video involve a student in the classroom being called down to the office and the classroom teacher helping a student next to the peer-model. At the end of each segment, the adult volunteer who was playing the role of the classroom teacher praises the peer-model for attending to their assignment.

The second peer-modeling video was created by the researcher in conjunction with the Utah Personnel Development Center (UPDC). The video was made for the purpose of distribution to school professionals at a conference for the Utah Council for Children with Behavioral Disorders (CCBD) held in September of 2012. This video follows the same format and script described previously and depicts male and female student volunteers in the second and third grades working independently on math assignments in a classroom. The second peer-model video contains eight different peer-model clips. Four of the clips portray female peer-models and four of the clips portray male peer-models. Each clip is approximately 5 minutes long and the peer-models in this video are also shown working on independent math worksheets with near 100% on-task rate.

MotivAider. A MotivAider (Behavioral Dynamics, 2000) is also provided as part of the intervention package. As described previously, the MotivAider is a tactile self-monitoring prompt. During the intervention phase of the study, each participant was provided with a MotivAider to wear during independent math seatwork time in his or her classroom. The device was set to vibrate at random intervals within a mean of 60 seconds. The MotivAider was distributed and collected by the classroom teacher at the beginning and end of each independent seatwork period in math.

Self-Monitoring Form. During the intervention phase of the study, each participant was provided with a self-monitoring form to place on his or her desk at the beginning of his or her independent math seatwork time. (See Appendix D for a copy of the Self-Monitoring Form.) The form provided the participants with a place to record whether they were on- or off-task each time they were prompted to self-monitor by the MotivAider. The form consisted of a grid of 60 squares on a 4x5.5 inch piece of paper. The form was distributed and collected by each participant's classroom teacher.

Self-Plotting Graph. During each office intervention session with the program implementer, the participants reported their self-monitored rates of on-task behavior on the Self-Plotting Graph. (See Appendix E for a copy of the Self-Plotting Graph.) The x-axis represents the self-monitoring period. The y-axis represents the amount of time that the participant reported that they were on-task while self-monitoring during each period. The x-axis contained 49 rows and the y-axis contained 20 columns.

Spinner and Reward Menu. The Reward Spinner (Jenson et al., 1995) is made up of seven different sized wedges labeled "1-5" and "?". The Reward Spinner is accompanied by a Rewards Menu, which contains a list of seven items numbered 1-5 and "?". The reward associated with each number is written next to it with a water-based marker. The row that contains the "?" is labeled as the Mystery Motivator. The rewards that were offered during the intervention include candy, pencils, stickers, or small toys. After each office session with the program implementer, or when the participant earned a Bonus Spin by bringing academic assignments the session, they were reinforced by earning a spin on the Reward Spinner. The participant would spin the arrow on the

Reward Spinner and were given whatever reinforcer the arrow landed on (either a numbered reinforcer or the Mystery Motivator).

Mystery Motivator. The Mystery Motivator (Jenson et al., 1995) consists of a valued reinforcer that is written on a slip of paper and placed in a sealed envelope. Each envelope is marked with a question mark. The reinforcer contained in the envelope is unknown to the participant. The participants were told that the Mystery Motivator envelope contained an especially desirable reward, thus increasing their anticipation and desire to earn a Reward Spin. Each time a Mystery Motivator reward was earned, a new reward was written down and placed in the envelope. Rewards that were placed in the Mystery Motivator envelope included the opportunity to spin twice for rewards, the option to choose any item on the reward menu, and specific small toys not available on the Reward Menu.

Procedures

Initial permission to conduct the study was obtained from the University's Institutional Review Board, the participating school district, and the principals of each elementary school where the study was conducted. The school principals, special education teachers, and regular education teachers in each of the two participating schools assisted in the selection of the participants for the study. Once a list of candidates was obtained, a form was sent to the parents or guardians of each child that provided basic information about the study. The form also asked for permission to specifically observe the on-task behavior of the child for possible inclusion in the study.

On-task observations using whole-interval recording were conducted for each candidate as the researcher received permission to observe. A student was considered a good candidate for the study if his or her rate of on-task behavior was observed to be approximately 60% or less during their first three baseline observations and their accuracy or completion of problems on each math probe was less than 70%. Six out of the seven students who were observed qualified to participate in the study. Each of the students that qualified for the study were observed to have an on-task percentage at or below 53% on each of their first three baseline observations. Their accuracy or completion of problems on their math worksheets was also observed to be below 70%. The parents of the student that did not qualify were contacted to inform them that the student had not been selected for the study. The parents were also informed about several resources that were available that could be helpful in decreasing problematic behavior in the classroom.

A form asking for parent permission for inclusion in the study, which also contained additional information about the study, was sent to the parents or guardians of each student who was chosen to be part of the study. An optional questionnaire asking for additional information about the student was also sent home with the parental permission form. The parents or guardians of each of the 6 potential participants gave permission for inclusion in the study. Assent was also obtained from each participant upon entering the intervention phase of the study.

Observer Training and Interrater Reliability

The researcher enlisted the assistance of another school psychologist in order to help perform the on-task observations and assist in running the intervention package. In order to assure interrater agreement, an observation training session was conducted. During the training session, the researcher reviewed the definitions of on-task and off-task behavior included on the observation form in *The Tough Kid Tool Box* (Jenson, Rhode, & Reavis, 1995) with the volunteer school psychologist. The two previously described observation training videos were then used in order to practice performing the observations. Practice observations were repeated until a minimum of .80 interrater reliability was achieved on each video. Cohen's Kappa, which corrects for chance agreement, was used to calculate interrater reliability. The formula is as follows:

$$k = (Po - Pc) / (1 - Pc)$$

where: Po = the proportion of agreement between observers of occurrence and nonoccurrence

Pc = the proportion of expected agreement based on chance

In order to ensure that interrater reliability was maintained throughout the study, two observers collected data for each participant simultaneously during 33% of the observation probes conducted throughout the study. These observations occurred once while collecting baseline and follow-up data and three times while collecting intervention data for each participant.

Baseline

Three baseline data probes were collected for each participant using a response discrepancy whole-interval recording format. Baseline data were collected in three observation sessions for Participant 1 and 4. Four baseline data probes spread across 5 observation days were taken for Participants 2 and 5. Five baseline data probes spread across 7 observation days were collected for Participants 3 and 6. After collecting the third baseline data probe for each participant, Participants 1 and 4 entered the intervention phase. Two days after Participants 1 and 4 entered the intervention phase, baseline data were once again taken for Participants 2, 3, 5 and 6 and then Participants 2 and 5 entered the intervention phase. This pattern of baseline data collection and entry into the intervention phase was duplicated for Participants 3 and 6.

During the baseline phase of the study, each participant was provided with the curriculum-based math worksheets generated from the Math Worksheet Generator located on www.interventioncentral.org. Each worksheet contained 60 individual math problems. The participants worked on these worksheets during each baseline observation. After each observation was completed, the worksheets were collected by the classroom teacher and then given to the researcher.

Participant Orientation

Before each participant entered the intervention phase of the study, they took part in an initial orientation meeting. The orientation was conducted one-on-one with each participant by the researcher at Site 1 or the volunteer school psychologist who implemented the On-Task in a Box program at Site 2. The objectives of the orientation

session as described in the manual (Jenson & Sprick, in press) are to acquaint each participant with the program goals, which are to improve on-task behavior and academic achievement. During the orientation, participants were taught the definition of on-task behavior and were acquainted with each component of the intervention package. The participants were also taught how to use the MotivAider and self-recording form to self-monitor their on-task behavior as well as how to keep track of their on-task behavior on a self-plotting graph. The skills learned by the participants during the orientation were taught via the Fasthands animation video, peer modeling video, and facilitator instruction.

The steps for conducting the orientation as described in the On-Task in a Box manual (Jenson & Sprick, in press) are listed below:

1. On the first day when meeting with an individual student, welcome him and tell him about the On-Task in a Box Program.

a) Indicate that it is a program to help them to be on-task in their classroom, work better, and get better grades.
b) Tell the student that you are going to help them learn to self-record their on-task behavior by using a MotivAider and by watching other students working on a Peer-Modeling DVD.
c) Show the student the MotivAider and Self-Recording Form. Demonstrate how the MotivAider works by putting it on your belt or in your pocket and set the vibrator to 1 minute to demonstrate its use.
d) Tell the student that they will learn all the skills they need to know by watching the fun Fasthands animation DVD videos.

e) Tell the student that they will also learn how to keep track of their progress with a Self-Plotting Graph (show them the graph).

f) Tell the student that they will be able to win prizes and rewards with the Reward Spinner and with a Mystery Motivator (show them the Reward Spinner and Mystery Motivator and demonstrate how it works).

2. Play the Fasthands Video with the sequence for defining on-task and off-task behaviors for the student.

a) Stop the DVD and ask the student to give you the definition of on-task. "*Looking at the teacher or their work and doing what the teacher wants.*"

b) If the answer is correct, go to the next section. If the student does not give you the correct answer, give the student the correct answer, have them repeat it, show the Fasthands Video again, and then ask for the definition of on-task.

3. Play the Fasthands Video with the sequence for learning how to self-record on-task behavior for the student.

a) Stop the video and ask the student when should they put an "X" in the Self-Recording Form box. He should answer: *"When I am looking at the teacher or my work and doing what my teacher wants is when I put an "X" in the box on my self-recording form."*

b) Ask him when he should put a "–" in the Self-Recording Form box. He should answer: *"When I am not looking at the teacher or my work and not doing what my teacher wants".*

c) If the student's answer is correct, go to the next section. If the answer is incorrect or incomplete, give them the correct answer and have them repeat it. Then repeat the Fasthands Video and ask them again for the correct answer.

4. Play the Fasthands Video with the sequence on how to record their on-task progress on the Self-Plotting Graph for the student.

a) Stop the video and ask how they should self-record their progress: They should answer: "*Count the number of Xs on your Self-Recording Form. Find this number on the Self-Plotting Graph, mark it, and connect this number to the previous day's number."*

b) Ask them how to tell if they are making progress. They should answer: *"If the line on the graph is going up, I am making progress. If the line is flat or going down I am not making progress."*

c) If they are correct in their answer, go to the next section. If they are incorrect, give them the correct answer, and have them repeat it. Repeat the Fasthands Video and ask them the questions again.

5. *Show the first scenario from the Peer-Modeling Video (pick a scenario from the DVD of a same sex and relatively same age peer).*

a) Have the student set the MotivAider to vibrate randomly at 1-minute intervals and put it on their belt or in their pocket.

b) Give them a Self –Recording Form and pencil.

c) Start the Peer-Modeling DVD scenario. Have them watch it for at least 5 minutes and self-record the peer's on-task behavior on the Self-Recording Form.

d) At the end of the observation, have the student count the number of X's on the form.

e) Have the student mark the number on Self-Plotting Graph.

f) Praise the student for their success and make any corrective comments about the observation and self-recording procedure.

6. Debrief the student and get them ready for the next meeting.

a) Give the student the MotivAider, a Self-Recording Form, and if necessary, a pencil.

b) Have them model one more time how to set the MotivAider to vibrate at 1-minute intervals and put it on their belt or in their pocket.

c) Tell the student to take it back to class and give the MotivAider and Self-Recording Form to their teacher.

d) Indicate that their teacher will have them self-record their on-task behavior back in the regular classroom

e) Tell them that the next time they come to your office, you are going to have them practice their recording of on-task behavior by watching the Peer-Modeling Videos.

f) Ask the student to bring an example of academic work they have done in the general classroom. Indicate that sometimes they will receive a bonus reward spin if they bring the academic work to the next appointment.

g) Make the next appointment with the student.

7. Reward the student with the Reward Spinner and Mystery Motivator.

a) After the student has finished the Fasthands Video, has recorded the on-task behavior of the peer on the Peer-Modeling Video, and is debriefed and ready to return to their class, they are reinforced for participating.

b) Have the student spin the arrow on the Reward Spinner and give them whatever reinforcer the arrow lands on either a numbered reinforcer wedge or the Mystery Motivator.

c) Always congratulate the student, praise their efforts, and tell them you look forward to their next meeting.

Teacher Orientation

Before the participants entered the intervention phase, the researcher and the volunteer school psychologist met with the participants' teachers at their respective sites. During this meeting, the program implementer at each site explained the On-Task in a Box program to the teachers. The steps involved in the self-monitoring intervention and the teacher's role in this intervention was also explained. During the meeting, each teacher was provided with a copy of the Teacher Implementation Steps Form, created by the researcher, which summarizes the teachers' responsibilities during the intervention. (See Appendix H for a copy of the Teacher Implementation Steps.) The form also included a weekly calendar designed to remind the teacher of the dates when their student would be observed. A copy of the Teacher Implementation Steps was given to each teacher at the end of each week during the intervention phase. At the end of the meeting, consent was obtained from each teacher.

Intervention Phase

Upon entering the intervention phase, each participant continued to be observed directly using a whole-interval recording, response discrepancy format. The researcher and the volunteer school psychologist conducted each of the observations. The participants worked on a curriculum-based math worksheet generated from interventioncentral.com each time a data probe was taken. Probes were always taken prior and post to the phase change and the remaining probes were conducted following a previously designed observation schedule. The number of probes taken during the study for each participant including baseline data was equal to 12 probes. In order to assure that the data probes for each participant were collected in somewhat randomized manner, the researcher created the observation schedule before the start of the intervention phase. The schedule was based on the time when each participant received his or her math instruction as well as the availability of the observers. Any changes to the original observation schedule were due to a participant being absent or occasional changes in the school schedule. When a change occurred, the participant was scheduled for observation as close to the original time slot as possible.

Intervention Sessions

Each intervention session was conducted in a standardized format following the outline provided in the On-Task in a Box manual (Jenson & Sprick, in press). The researcher conducted the intervention sessions for the 3 participants at Site 1. A volunteer school psychologist who had read the intervention manual and discussed the intervention procedures with the researcher ran the intervention sessions for the participants at Site 2.

Each session lasted approximately 15 minutes. Once each participant entered the intervention phase of the study, they received two to three intervention sessions per week for approximately 4 weeks including the orientation session. Participant 1 received nine intervention sessions. Due to an absence, Participant 4 received 8 intervention sessions. Participants 2 and 5 received eight sessions and Participants 3 and 6 received seven sessions.

The objectives of each intervention session as described in the manual (Jenson & Sprick, in press) were to track the participant's rates of on-task behavior in the classroom, review examples of the participant's academic work, and to give the participant practice in recording on-task behavior by watching the Peer-Modeling Videos. The steps that were followed for each session as described in the On-Task in a Box manual (Jenson & Sprick, in press) are listed below:

1. When the students first comes to the Intervention Session:

a) Greet the student and thank them for coming.
b) Ask if they have their MotivAider and their Self-Recording Form. (If not, they may have to go to back to class and get them.)
c) Ask him if he brought an example of his general classroom academic work.
d) Ask them about their experience using the MotivAider and self-recording their on-task behavior in the general classroom. (If there was a problem, make note of this to bring up in the next teacher conference meeting.)
e) Check for student understanding of the On-Task in a Box program.
f) Ask the student the definition of on-task. (If there is a mistake, reshow the Fasthands Video.)

g) Ask the student if they remember how to use the MotivAider and record on-task behavior. (If there is a mistake, reshow the Fasthands Video.)

h) The check for student knowledge of the program can be skipped when it is evident the student know this information.

2. Review of the Student's Academic Work Example

a) Ask to see the work that the student has brought to the session.

b) Praise the student for bringing it and how the work looks. (Make a specific comment about something you like.)

c) Make note of the quality of the work. If there is a problem with the work or the student did not bring the work, make a note to discuss it at the next teacher conference meeting. You may return the work to the student or keep it in a file to document progress when you meet with the teacher.

d) Tell the student that when he brings an example of his academic work, he may get a bonus reward spin. Approximately once every three of four times when the student brings the work, have him spin the Reward Spinner for the bonus reward.

3. Plotting the Student's Progress

a) Ask the student to count the number of Xs for on-task behavior they have on their Self-Recording Form. The student may have more than one Self-Recording Form if they used the MotivAider and self-recorded more than once in the general classroom between sessions. If this is the case, have them count all the Xs and help them take an average (i.e., all the number of Xs on the forms divided by the number of forms) to get one number.

b) Give the student their Self-Plotting Graph, date it, and have them find and mark the number on the graph.

c) Have the student connect the numbers between the days to form a line.

d) Ask the student if it is going up showing progress or staying flat or going down indicating no progress.

e) Praise the student for their efforts even if they are not making progress. Tell him it is going to get better.

f) If the student has trouble plotting their progress, reshow the Fasthands Video on *How to Plot Progress on the Self-Plotting Graph*.

g) Keep the Self-Plotting Graph in a student file possibly with the examples of academic work the student has brought to the session. These can be reviewed at the next teacher conference meeting.

4. Practicing Recording On-Task Behavior from the Peer-Modeling Video

The goal of observing a peer model's on-task behavior is not to improve self-recording behavior. Rather, the research indicates that the primary active variable for improving on-task behavior in a student is the observation of another peer demonstrating on-task behavior or viewing a self-model video if you include that option.

a) Load the Peer-Modeling DVD into the computer or DVD player. Pick a scenario of a peer approximately the same age and sex as the student with whom you are working.

b) Give the student the MotivAider set to vibrate randomly at 1-minute intervals, a Self-Recording Form, and a pencil.

c) Tell the student that you want them to observe the peer in the video and record the peer's on-task behavior when the MotivAider vibrates.

d) Start the peer video and play it for at least 5 minutes with the student observing.

e) During the 5-minute observation, reinforce the student for watching the peer video and coach his performance with statements such as (statements should be made approximately every 30 seconds with 10 coaching statements in a 5 minute observation):

- *Wow! Way to look at the video*
- *Did you see that? The kid in the video went off task but came right back on!*
- *Hey, you caught that on-task and wrote it down went the MotivAider vibrated!*
- *Keep on watching, you've got this down!*
- *Cool, you aren't missing a thing!*
- *You have eagle eyes!*
- *Way to keep watching!*
- *You've got it down! Way to be glued to watching!*
- *Never seen sharper eyes on the peer!*
- *Sweet! You are locked on!*

f) After the approximate 5-minute observation, stop the video and praise the student for working with you and emphasize the progress they are making. Indicate that you will be meeting with his teacher soon and will show her how much process he has made.

5. Debriefing the Student and Getting Them Ready for the Next Meeting

a) Give the student the MotivAider, a Self-Recording Form, and if necessary, a pencil.

b) Have them model one more time how to set the MotivAider to vibrate at 1-minute intervals and put it on their belt or in their pocket.

c) Tell them to take it back to class and give the MotivAider and Self-Recording Form to their teacher.

d) Indicate that their teacher will have them self-record their on-task behavior back in the classroom.

e) Tell them that the next time they come to your office, you are going to have them practice more recording of on-task behavior by watching the Peer-Modeling Videos.

f) Ask the student to bring an example of academic work they have done in the general classroom. Indicate that sometimes they will receive a bonus Reward Spin if they bring the academic work to the next appointment.

g) Make the next appointment with the student.

6. Reward the Student with the Reward Spinner

a) After the student has finished recording and observing the behavior of the peer on the Peer-Modeling Video, and has been debriefed, they are reinforced.

b) Have the student spin the arrow on the Reward Spinner and give them whatever reinforcer (i.e., numbered reinforcer wedge or Mystery Motivator) the arrow lands on.

c) Always congratulate the student, praise their efforts, and tell them you look forward to their next meeting.

7. *Student Marking the Fun'O'Meter*

a) After the student has been rewarded, have them mark the Fun 'O' Meter or Student Feedback Form depending on the age of the student.
b) Ask the student if they liked the session and thought it was useful.
c) If the student marks the Fun 'O' Meter in the "Ouch!" or "No Help" regions, ask them what is wrong and how you could make it better.
d) Try to adjust the sessions to the student's needs to make it fun and helpful.

Self-Monitoring in the Classroom

As part of the intervention package, each participant was involved in a self-monitoring intervention while they worked on their independent math assignments in their respective classrooms. Each participant self-monitored their rate of on-task behavior during independent math time for approximately 30 minutes four times a week. During this time, the participants utilized the MotivAider together with a self-recording form. The MotivAider was set to vibrate at random intervals within a mean of 60 seconds. Each time the MotivAider vibrated, the participants assessed whether or not they were on-task and made the appropriate mark on the on-task form. If they were on-task, they put an "X" mark on the self-recording form. If they were off-task, they marked a "-" on their self-recording form. Each participant's respective teacher was responsible for distributing and collecting the MotivAider and Self-Recording Form. The teachers also provided the participants with the MotivAider and their completed Self-Recording Forms to take with

them to each individual office session with the researcher or volunteer school psychologist. At the start of each session, the participant's on-task rates were reviewed and the participants tracked their progress on a self-plotting graph.

Weekly Teacher Follow-Up

As recommended in the On-Task in a Box Manual (Jenson & Sprick, in press), the researcher and volunteer school psychologist held weekly meetings with each participant's teacher at their respective sites. These meetings began at the end of the first week that a participant was involved in the intervention. During these meetings, the participant's progress was reviewed and the program implementer and the teacher discussed any difficulties that the participants had with the self-recording intervention. The program implementer also reminded the teacher of the upcoming dates when observation probes would be conducted. The program implementer at each site used the Weekly Teacher Follow-Up Meeting Checklist to help assure that the meetings were conducted as recommended in the manual. (See Appendix H for a copy of the Weekly Teacher Follow-Up Checklist.)

Follow-up Phase

Using the same observation format employed during the intervention phase, three follow-up on-task observations were conducted for each participant while they were working on independent seatwork in math without intervention. These observations were conducted 3 weeks following the intervention phase. During each observation, the participants were provided with a curriculum-based math worksheet to work on. The

worksheet was collected by the classroom teacher at the end of each 15-minute observation period.

Data Analysis

On-Task Rates

On-task rates were collected via direct observation. The percentage of time each participant was on-task was calculated by taking the number of intervals rated as on-task and dividing that number by the total number of intervals observed. The data are also plotted to allow for visual analysis of any patterns in the difference between each participant's baseline on-task rates and their on-task rates during the intervention phase.

Effect Size

A separate effect size was calculated for each participant using the 'no assumptions' approach as presented by Busk and Serlin (1992). Using this model, a separate effect size was obtained for each participant during the intervention by dividing the difference in the baseline and treatment means by the baseline standard deviation. The formula used is as follows:

$$\frac{\text{(Mean of Intervention Phase} - \text{Mean of Baseline Phase)}}{\text{Standard Deviation of Baseline Phase}}$$

Cohen (1988) defined a set of conventional standards for interpreting effect size. Using these standards, 0.2 would be considered a small treatment effect, 0.5 would be a medium treatment effect, and a treatment with an effect size of 0.8 or above would be considered to have a large effect.

Percentage of Nonoverlapping Data

Percentage of nonoverlapping data (PND) scores were also calculated for each participant in order to provide further information concerning the effectiveness of the intervention package. The method for calculating PND scores for studies that focus on increasing target behaviors has been described by Olive and Smith (2005). The first step is to identify the highest baseline point. Next, the number of data points observed to be above the highest baseline data point is calculated. Finally, the number of data points above the highest baseline data point is divided by the total number of data points. PND scores over 90 are regarded as very effective. Scores of 70 to 90 are considered questionable, and PND scores below 50 are regarded as ineffective treatments (Scruggs & Mastropieri, 1998).

Academic Performance

The curriculum-based math worksheets that were completed by each participant were analyzed by the researcher in order to determine the average number of problems that were completed as well as the percentage of problems solved correctly during each phase. The average number of problems completed during each phase was calculated by counting each problem for which the participant gave an answer and then dividing that number by the total number of worksheets completed. Both correct and incorrect answers were counted as items completed. Academic accuracy during each phase was calculated by taking the total number of problems solved correctly and dividing that number by the total number of problems completed. Rather than using correct digits, correct answers were used because this was seen as being more realistic to how a classroom teacher

would score a student's paper. The data are also plotted to allow for visual analysis of any patterns in the difference between the participants' performance during the baseline and intervention phases.

Consumer Satisfaction

The information gathered from the consumer satisfaction questionnaires is presented in a table format. The questions are listed along with the responses that were given by each participant. A mean rating for each question on the participant and teacher questionnaire is reported. Open-ended information is reported in narrative form.

RESULTS

The goal of this research project was to increase the rate of on-task behavior and academic performance of 6 students in the second and third grades by implementing the On-Task in a Box program. The program was implemented at two different sites. Throughout the intervention phase, the participants were involved in a self-monitoring intervention during their independent seatwork time in math. The self-monitoring intervention involved the use of the MotivAider and a Self-Monitoring Form on which the participants kept track of the amount of time they were on- task and off-task while working independently. During the intervention phase, each participant also met 2 to 3 times a week with their program implementer at his or her respective site. During these sessions, the participants reviewed their academic and behavioral performance in the classroom. Each participant also watched a video clip that showed a peer-model displaying attentive behavior while working on independent seatwork. While watching the video, the participants monitored the peer-model's rates of on-task behavior using the MotivAider and the Self-Monitoring Form.

The following pages report the results that were obtained during the implementation of this project. Results are reported for each of the seven research hypotheses. Interrater agreement and treatment integrity are also addressed.

Research Hypotheses

Hypothesis 1: "Rates of On-Task Behavior Will Be Higher than Baseline On-Task Rates after Receiving the Package Intervention as Measured by Direct Observation and Effect Size"

The data collected during the baseline phase of this study show a substantial gap in the mean on-task rates of behavior between the participants and their peers. The mean baseline rate of on-task behavior for all participants in this study was observed to be 21%. The mean composite rate of on-task behavior for comparison peers at baseline was 82%. During the intervention phase, the mean rate of on-task behavior displayed by all participants rose to 68%. The mean composite rate of on-task behavior for the comparison peers during the intervention phase was 83%. This result indicates that the package intervention effectively decreased the discrepancy in on-task behavior between the participants and their peers. The differences between the participant and peer on-task rates during baseline and intervention are illustrated in Figure 1. The effect size of the intervention package for each participant in the study was calculated to be at or above 3.07, which indicates that overall the intervention package was very effective in increasing the participants' on-task behaviors (Cohen, 1988). The mean percentage of nonoverlapping data (PND) score for all participants in the study was calculated to be 95.53. This score also indicates that overall, the intervention package was very effective in increasing the participant's rates of on-task behavior (Scruggs & Mastropieri, 1998).

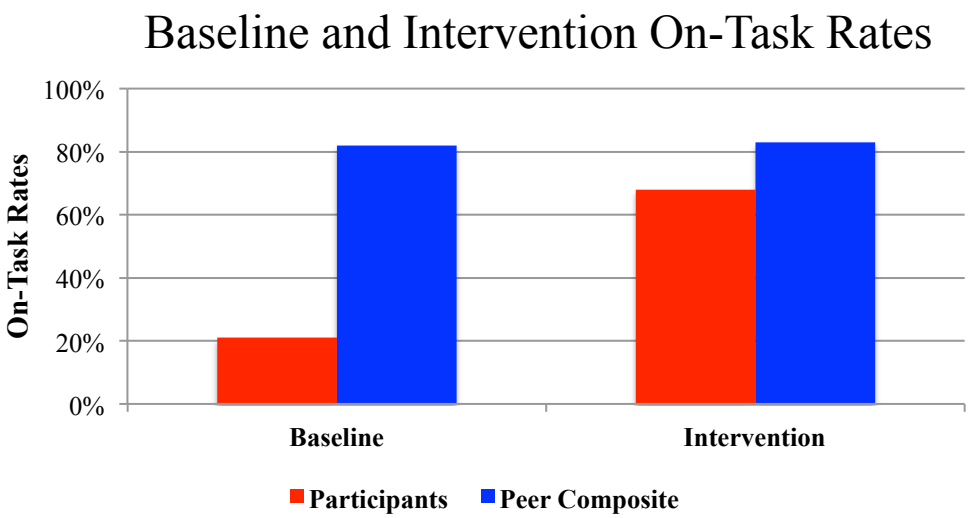


Figure 1. Overall Baseline and Intervention On-Task Rates

Site 1

The mean composite rate of on-task behavior during baseline for the participants at Site 1 was observed to be 31%. The mean composite rate of on-task behavior for their comparison peers at baseline was 82%. The differences between the participant and peer on-task rates during baseline at Site 1 are illustrated in Figure 2. During the intervention phase, the mean rate of on-task behavior displayed by the participants at Site 1 rose to 81%. The mean composite rate of on-task behavior for their comparison peers during the intervention phase was 86%. The differences between participant and peer on-task rates during the intervention phase are illustrated in Figure 3. The effect size for each participant at Site 1 was calculated to be at or above 3.07. The mean PND score for the participants at Site 1 was 100.

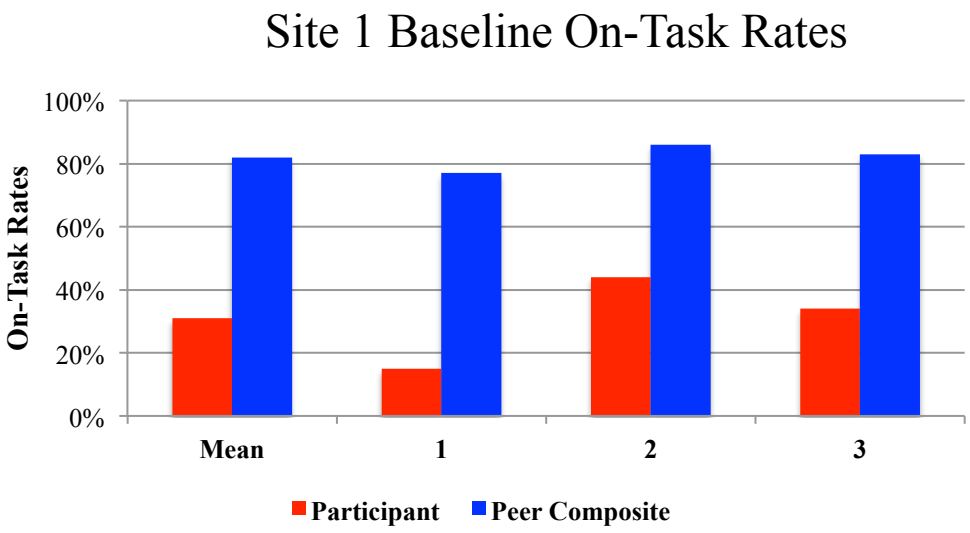


Figure 2. Baseline On-Task Rates for Participants and Peers at Site 1

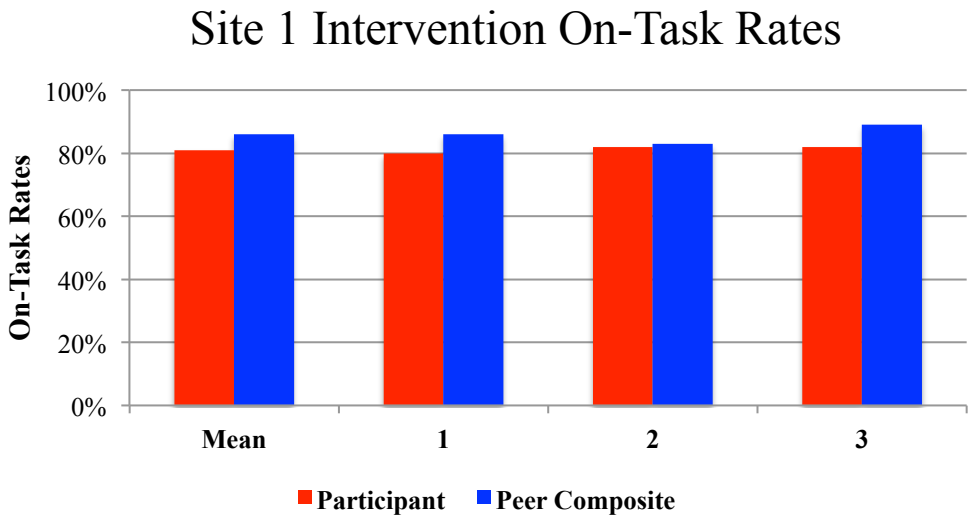


Figure 3. Intervention On-Task Rates for Participants and Peers at Site 1

At baseline, the mean rate of on-task behavior for Participant 1 was observed to be at 15%. During the intervention phase, Participant 1's mean rate of on-task behavior rose to 80%. In comparison, the mean composite on-task rates for same-gender peers in the same classroom as Participant 1 were 77% during baseline and 86% during the intervention phase. The effect size of the intervention package for Participant 1 was calculated to be 9.88. Participant 1's PND score was 100.

The mean rate of on-task behavior for Participant 2 during the baseline phase was observed to be at 44%. During the intervention phase, Participant 2's mean rate of on-task behavior rose to 82%. In comparison, the mean composite on-task rates for same-gender peers in the same classroom as Participant 2 were 86% during baseline and 83% during the intervention phase. The effect size of the intervention package for Participant 2 was calculated to be 4.57. Participant 2's PND score was 100.

At baseline, the mean rate of on-task behavior for Participant 3 was observed to be at 34%. During the intervention phase, Participant 3's mean rate of on-task behavior rose to 82%. In comparison, the mean composite on-task rates for same-gender peers in the same classroom as Participant 3 were 83% during baseline and 89% during the intervention phase. The effect size of the intervention package for Participant 3 was calculated to be 3.07. Participant 3's PND score was 100. The differences between each participant's rate of on-task behavior at Site 1 during baseline and intervention are illustrated in Figure 4.

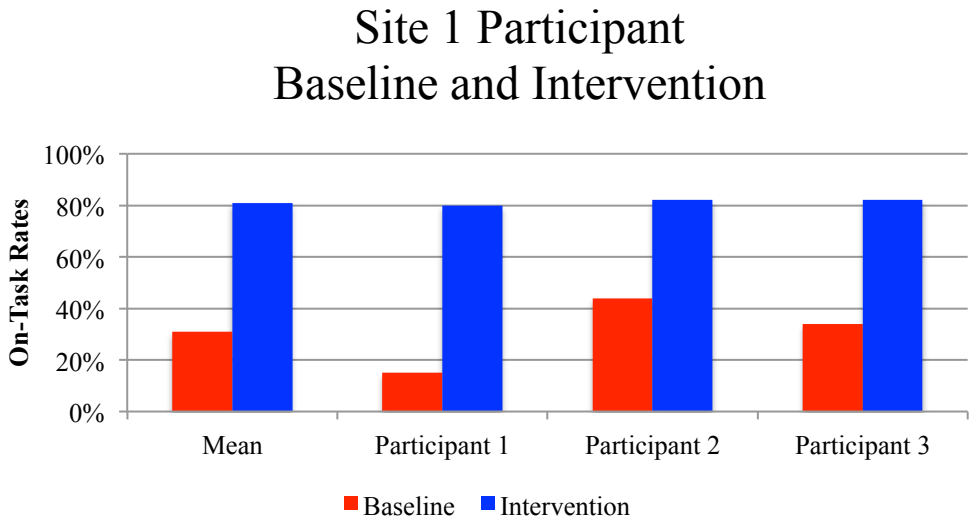


Figure 4. Rates of On-Task Behavior During Baseline and Intervention at Site 1

Site 2

The mean composite rate of on-task behavior at baseline for the participants at Site 2 was observed to be 11%. The mean composite rate of on-task behavior for their comparison peers at baseline was 81%. The differences between the participant and peer on-task rates during baseline are illustrated in Figure 5. During the intervention phase, the mean rate of on-task behavior displayed by the participants at Site 2 rose to 54%. The mean composite rate of on-task behavior for their comparison peers during the intervention phase was 79%. The differences between participant and peer on-task rates during the intervention phase are illustrated in Figure 6. The effect size for each participant at Site 2 was calculated to be at or above 3.63. The mean PND score for the participants at Site 2 was 91.07.

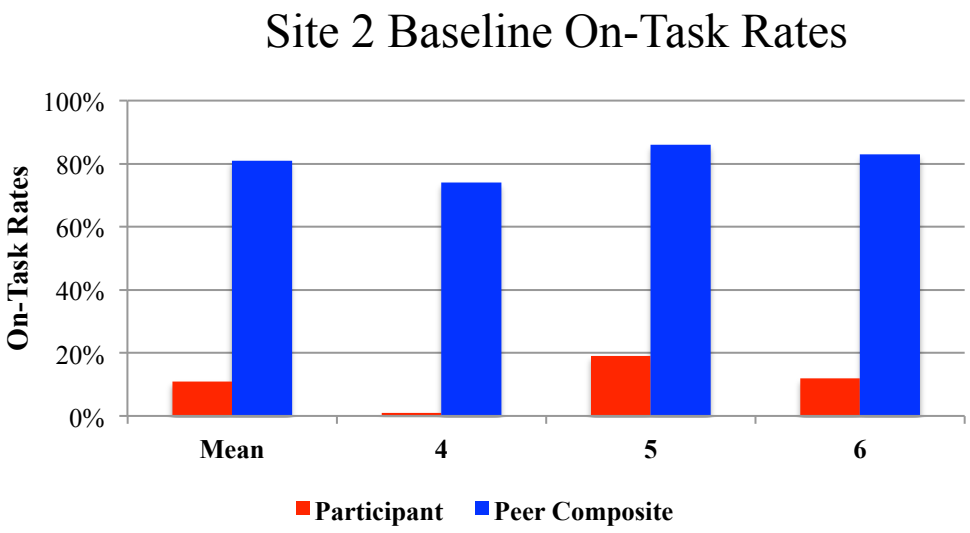


Figure 5. Baseline On-Task Rates for Participants and Peers at Site 2

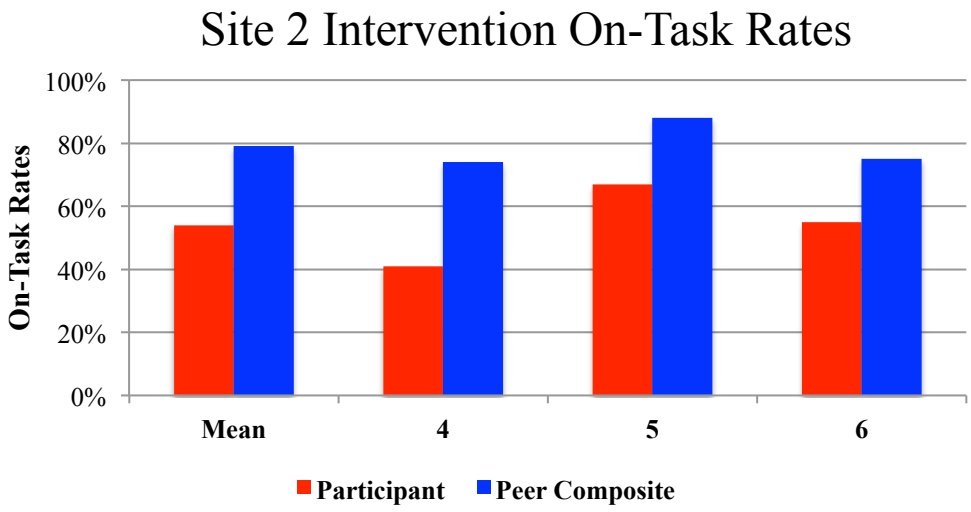


Figure 6. Intervention On-Task Rates for Participants and Peers at Site 2

At baseline, the mean rate of on-task behavior for Participant 4 was observed to be at 1%. During the intervention phase, Participant 4's mean rate of on-task behavior rose to 41%. In comparison, the mean composite on-task rates for same-gender peers in the same classroom as Participant 4 were 74% during baseline and 74% during the intervention phase. The effect size of the intervention package for Participant 4 was calculated to be 40.11. Participant 4's PND score was 100.

The mean rate of on-task behavior for Participant 5 during the baseline phase was observed to be at 19%. During the intervention phase, Participant 5's mean rate of on-task behavior rose to 67%. In comparison, the mean composite on-task rates for same-gender peers in the same classroom as Participant 5 were 86% during baseline and 88% during the intervention phase. The effect size of the intervention package for Participant 5 was calculated to be 7.06. Participant 5's PND score was 87.5.

At baseline, the mean rate of on-task behavior for Participant 6 was observed to be at 12%. During the intervention phase, Participant 6's mean rate of on-task behavior rose to 55%. In comparison, the mean composite on-task rates for same-gender peers in the same classroom as Participant 6 were 83% during baseline and 75% during the intervention phase. The effect size of the intervention package for Participant 6 was calculated to be 3.63. Participant 6's PND score was 85.71. The differences between each participant's rate of on-task behavior at Site 2 during baseline and intervention are illustrated in Figure 7.

Overall, when compared to baseline, the data show that each participant involved in the study displayed a substantial increase in their percentage of on-task behavior while receiving the intervention. The rates on on-task behavior for all participants in the study

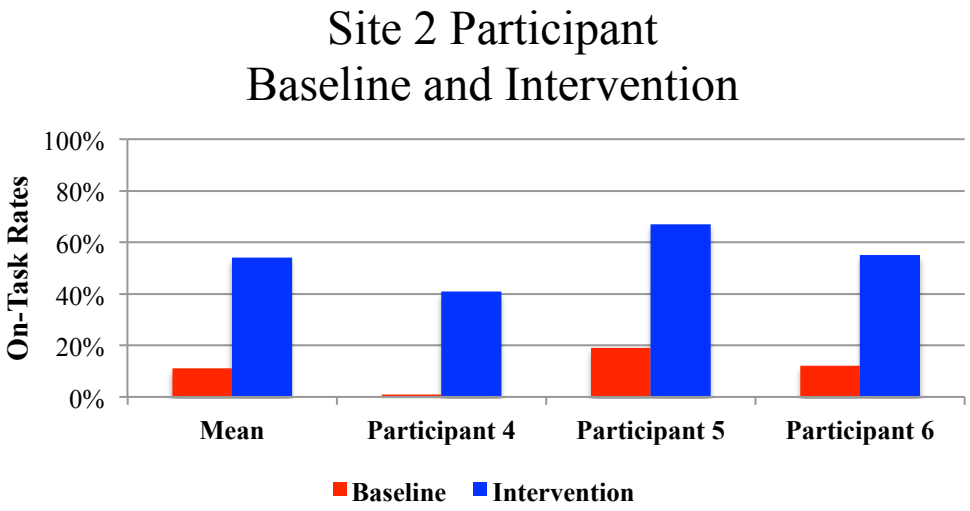


Figure 7. Rates of On-Task Behavior During Baseline and Intervention at Site 2

during each observation across baseline and intervention are illustrated in Figure 8. The effect sizes that were calculated from the data collected during the baseline and intervention phases are very large when compared to Cohen's standard (1988). The mean percentage of nonoverlapping data (PND) score for all participants in the also indicates that overall, the intervention package was very effective in increasing rates of on-task behavior (Scruggs & Mastropieri, 1998). Based on these data, it can be concluded that the participants at both sites showed substantial improvement in rates of on-task behavior from baseline to intervention, as stated in research hypothesis 1.

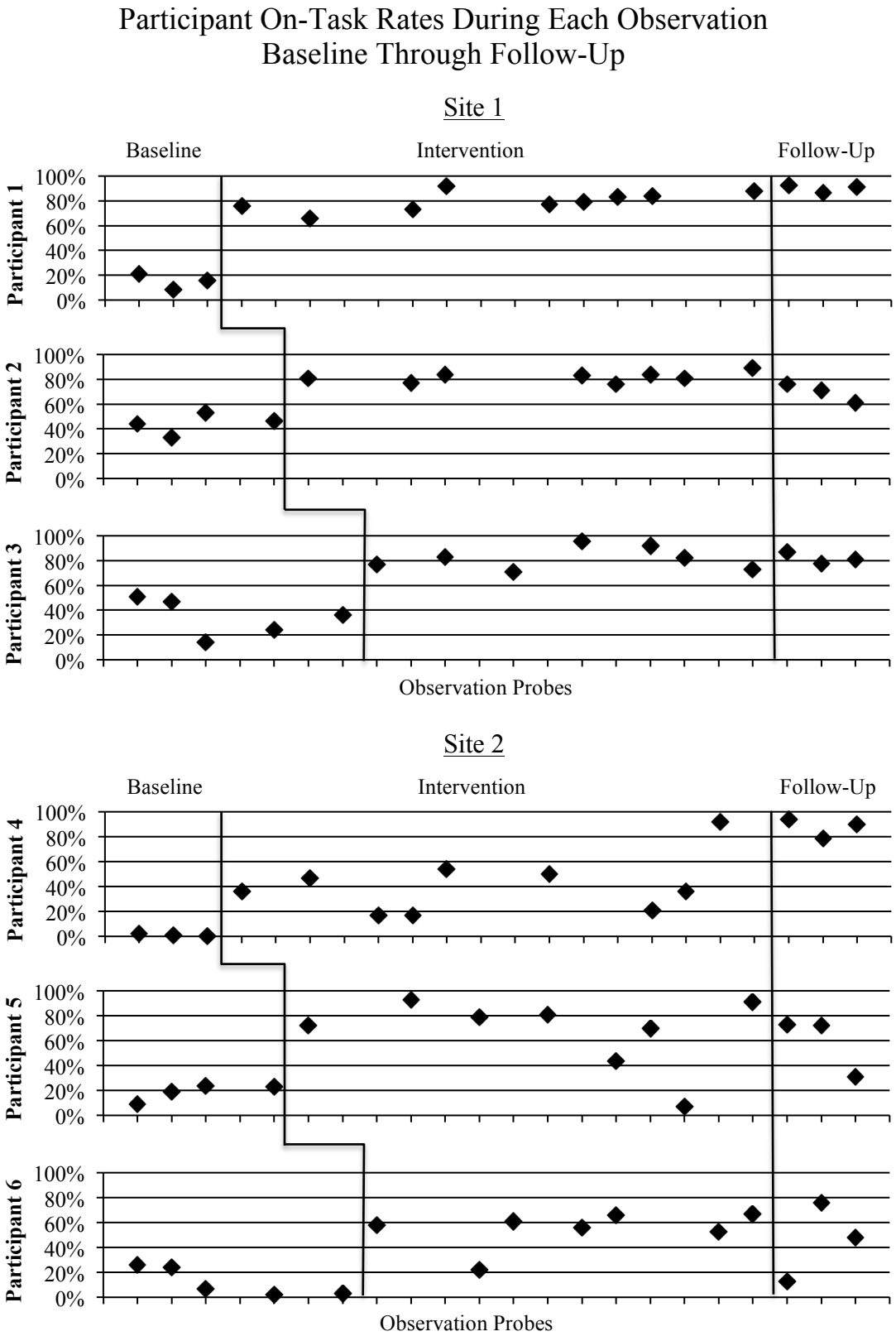


Figure 8. On-Task Rates Recorded During Each Observation Probe for Each Participant from Baseline Through Follow-Up.

Hypothesis 2: "On-Task Rates Will Remain Improved Above Baseline On-Task Rates at Follow-Up Observations at 3 Weeks PostIntervention as Measured by Direct Observation"

Three follow-up observations were conducted for each participant approximately 3 weeks after the intervention phase was completed. The mean on-task rate for all participants at 3 weeks follow-up without intervention was 72%. The mean rate of on-task behavior displayed by the participants at 3 weeks follow-up was slightly higher than their mean rate of on-task behavior of 68% during the intervention phase and substantially higher than their mean rate of on-task behavior of 21% during baseline. The mean rate of on-task behavior displayed by the participants' peers at follow-up was 82%. Figure 9 compares the mean on-task rates for all participants during baseline, intervention, and at 3 weeks postintervention.

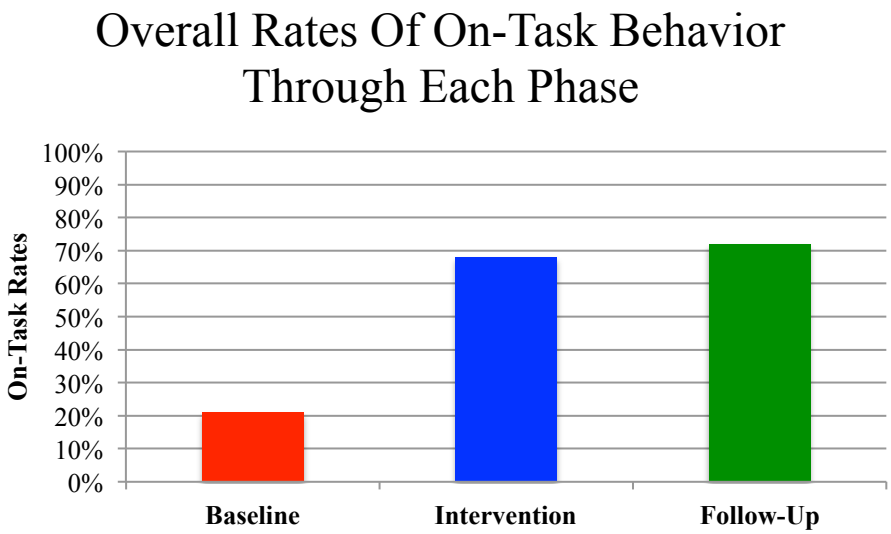


Figure 9. Overall Rates of On-Task Behavior for All Participants from Baseline Through Follow-Up.

Site1

The mean on-task rate for the participants at Site 1 at 3 weeks follow-up without intervention was 80%. The mean rate of on-task behavior displayed by these participants at 3 weeks follow-up was only slightly lower than their mean rate of on-task behavior of 81% during the intervention phase. Their rate of on-task behavior at 3 weeks follow-up was substantially higher than their mean rate of on-task behavior of 31% during baseline. The mean rate of on-task behavior displayed by the participants' peers during follow-up at Site 1 was 85%.

At 3 weeks postintervention, Participant 1 had a mean on-task rate of 90%. Her mean rate of on-task behavior observed at 3 weeks follow-up was observed to be higher than her mean rate of on-task behavior of 80% during the intervention phase and substantially higher than her mean rate of on-task behavior of 15% during baseline. The mean rate of on-task behavior displayed by same-gender peers in Participant 1's classroom during follow-up was 86%.

Participant 2 had a mean on-task rate of 69% at 3 weeks follow-up. His mean rate of on-task observed at 3 weeks follow-up was observed to be lower that his mean rate of on-task behavior of 82% during the intervention phase. However, his rate of on-task behavior at 3 weeks follow-up was higher than his mean rate of on-task behavior during baseline, which was 44%. The mean rate of on-task behavior displayed by same-gender peers in Participant 2's classroom during follow-up was 81%.

Participant 3 had a mean on-task rate of 82% at 3 weeks follow-up. His mean rate of on-task behavior at follow-up was found to be exactly the same as his rate of on-task behavior during the intervention phase, which was also 82%. His rate of on-task behavior

during follow-up was substantially higher than his rate of on-task behavior during the baseline phase, which was 34%. The mean rate of on-task behavior displayed by same-gender peers in Participant 3's classroom during follow-up was 88%.

The data gathered during the follow-up phase of the study indicate that the on-task rates at Site 1 were substantially higher at 3 weeks postintervention than they were at baseline. A summary of baseline, intervention, and follow-up data is shown in Table 1. Figure 10 compares the mean on-task rates for the participants at Site1 during baseline, intervention, and at 3 weeks postintervention. Figures 11, 12, and 13 show the daily on-task rates for each respective participant at Site 1 during each phase of the study.

Table 1

Site 1 Percentage On-Task

	Participant 1	1 Peers	Participant 2	2 Peers	Participant 3	3 Peers
Baseline M	0.15	0.77	0.44	0.86	0.34	0.83
Intervention M	0.80	0.86	0.82	0.83	0.82	0.89
Net Increase	0.65	N/A	0.38	N/A	0.48	N/A
Effect Size	9.88	N/A	4.57	N/A	3.07	N/A
PND	100	N/A	100	N/A	100	N/A
3-Week f/u M	0.90	0.86	0.69	0.81	0.82	0.88

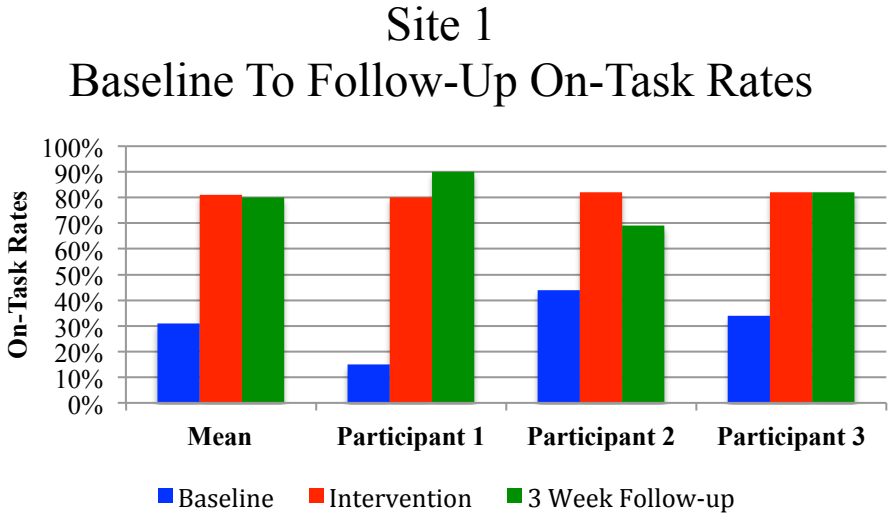


Figure 10. Site 1 Average Rates of On-Task Behavior Baseline Through Follow-Up.

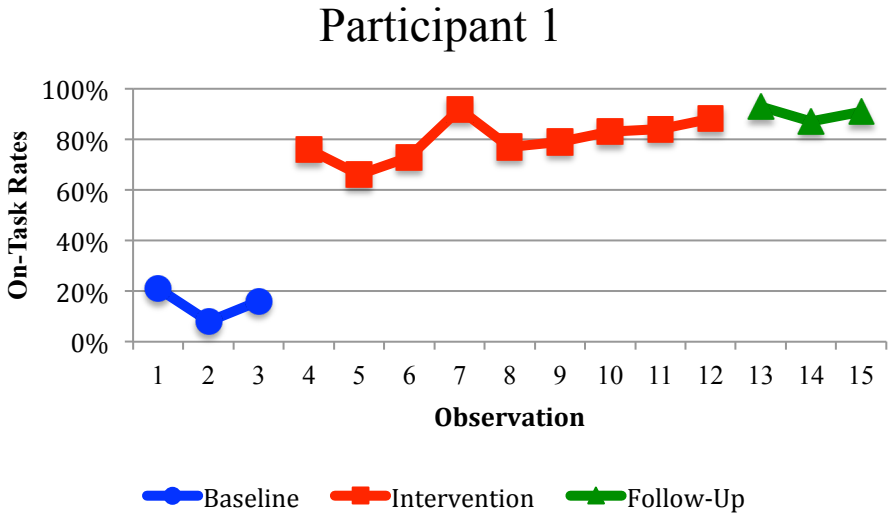


Figure 11. Rates of On-Task Behavior for Participant 1 for Each Observation from Baseline Through 3 Weeks Follow-Up.

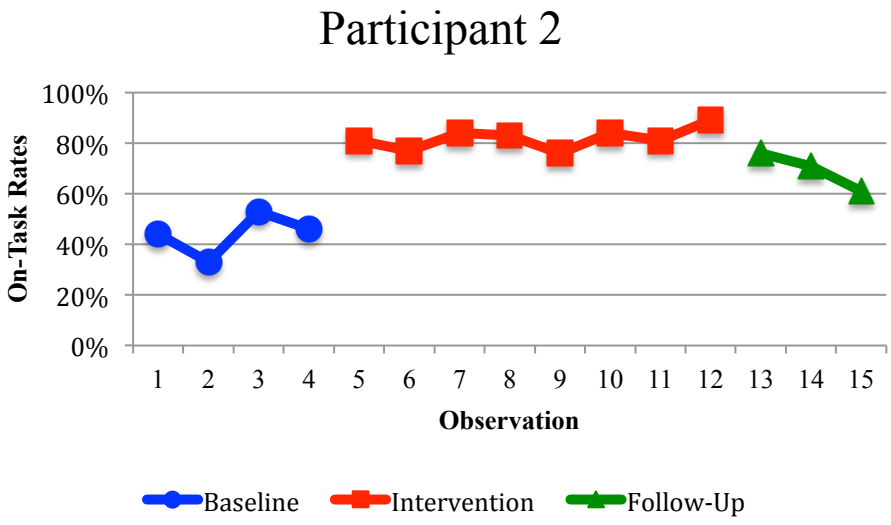


Figure 12. Rates of On-Task Behavior for Participant 2 for Each Observation from Baseline Through 3 Weeks Follow-Up.

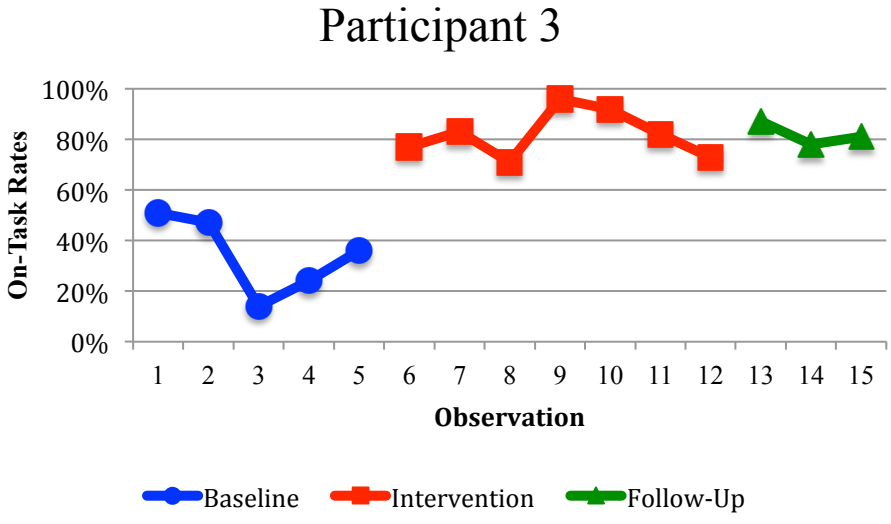


Figure 13. Rates of On-Task Behavior for Participant 3 for Each Observation from Baseline Through 3 Weeks Follow-Up.

Site 2

The mean on-task rate for the participants at Site 2 at 3 weeks follow-up without intervention was 64%. The mean rate of on-task behavior displayed by these participants at 3 weeks follow-up was higher than their mean rate of on-task behavior of 54% during the intervention phase. Their rate of on-task behavior at 3 weeks follow-up was substantially higher than their mean rate of on-task behavior of 11% during baseline. The mean rate of on-task behavior displayed by the participants' peers during follow-up at Site 2 was 80%.

At 3 weeks postintervention, Participant 4 had a mean on-task rate of 88%. His mean rate of on-task behavior observed at 3 weeks follow-up was observed to be much higher than his mean rate of on-task behavior of 41% during the intervention phase and 1% during baseline. The mean rate of on-task behavior displayed by same-gender peers in Participant 4's classroom during follow-up was 79%.

Participant 5 had a mean on-task rate of 59% at 3 weeks follow-up. His mean rate of on-task observed at 3 weeks follow-up was observed to be lower that his mean rate of on-task behavior of 67% during the intervention phase. However, his rate of on-task behavior at baseline was higher than his mean rate of on-task behavior during baseline, which was 19%. The mean rate of on-task behavior displayed by same-gender peers in Participant 5's classroom during follow-up was 77%.

Participant 6 had a mean on-task rate of 46% at 3 weeks follow-up. His mean rate of on-task observed at 3 weeks follow-up was observed to be lower that his mean rate of on-task behavior of 55% during the intervention phase. However, his rate of on-task behavior at baseline was higher than his mean rate of on-task behavior during baseline,

which was 12%. The mean rate of on-task behavior displayed by same-gender peers in Participant 6's classroom during follow-up was 83%.

The data gathered during the follow-up phase of the study indicate that the on-task rates at Site 2 were higher at 3 weeks postintervention than they were at baseline. A summary of baseline, intervention, and follow-up data for the participants and their peers at Site 2 are shown on Table 2. Figure 14 compares the mean on-task rates for the participants at Site 2 during baseline, intervention, and at 3 weeks postintervention. Figures 15, 16, and 17 show the daily on-task rates for each respective participant at Site 2 during each phase of the study.

Table 2

Site 2 Percentage On-Task

	Participant 4	4 Peers	Participant 5	5 Peers	Participant 6	6 Peers
Baseline M	0.01	0.74	0.19	0.86	0.12	0.83
Intervention M	0.41	0.74	0.67	0.88	0.55	0.75
Net Increase	0.4	N/A	0.48	N/A	0.43	N/A
Effect Size	40.11	N/A	7.06	N/A	3.63	N/A
PND	100	N/A	87.5	N/A	85.71	N/A
3-Week f/u M	0.88	0.79	0.59	0.77	0.46	0.83

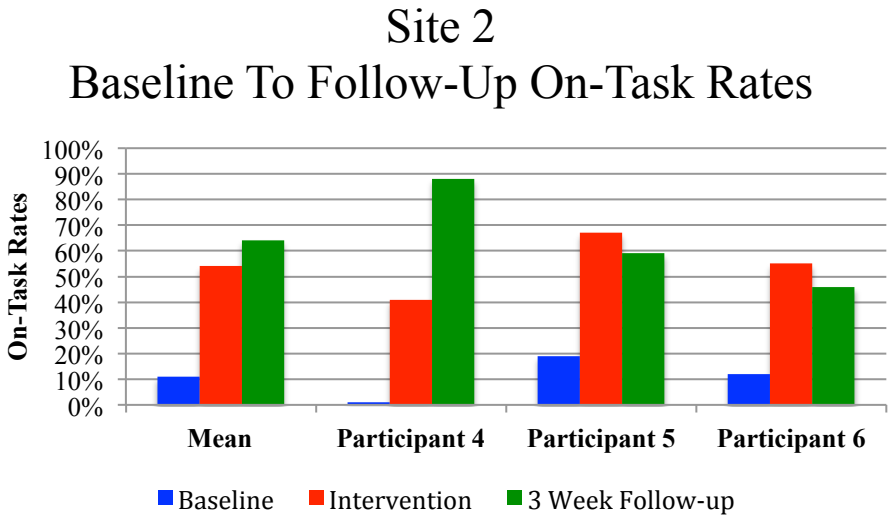


Figure 14. Site 2 Average Rates of On-Task Behavior Baseline Through Follow-Up.

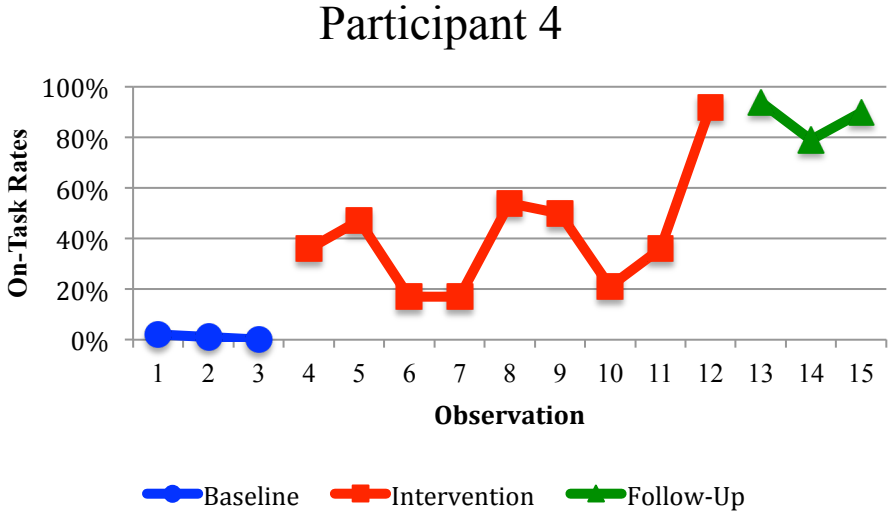


Figure 15. Rates of On-Task Behavior for Participant 4 for Each Observation from Baseline Through 3 Weeks Follow-Up.

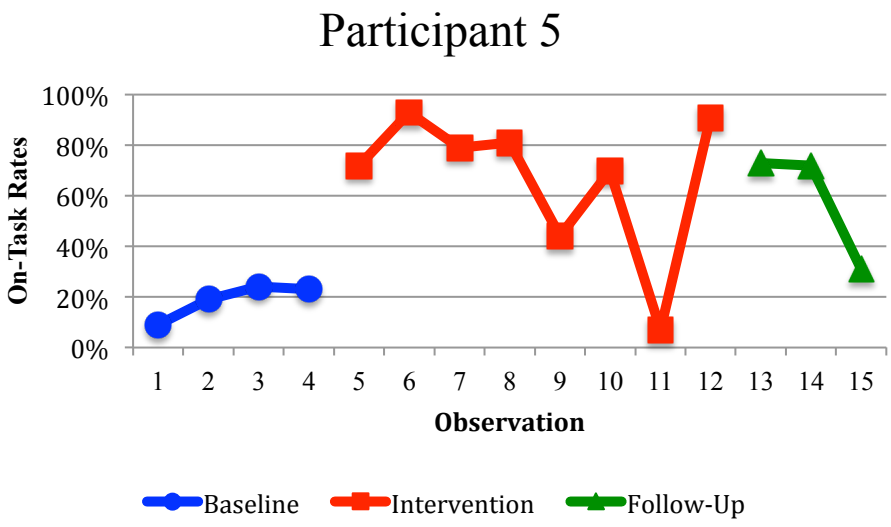


Figure 16. Rates of On-Task Behavior for Participant 5 for Each Observation from Baseline Through 3 Weeks Follow-Up.

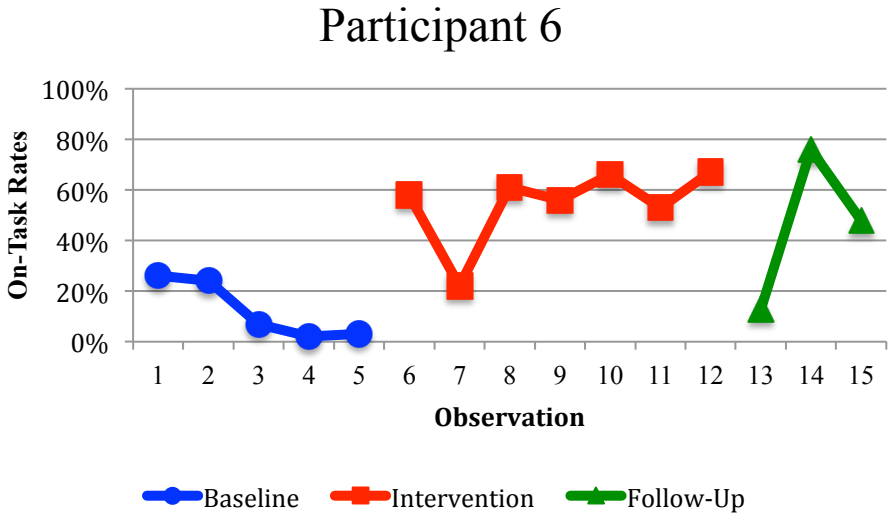


Figure 17. Rates of On-Task Behavior for Participant 6 for Each Observation from Baseline Through 3 Weeks Follow-Up.

Overall, these results indicate that the participants' rates of on-task behavior remained above baseline at 3 weeks postintervention. In fact, the average rate of on-task behavior observed for each participant at each site during follow-up remained above the rates observed during baseline. These data strongly support research hypothesis 2.

Compared to their rates of on-task behavior during the intervention phase, 3 of the participants displayed decreases in on-task behavior at 3 weeks postintervention. One participant maintained the same rate of on-task behavior at 3 weeks postintervention. Two of the participants displayed increases in on-task behavior at 3 weeks postintervention compared to their rates of on-task behavior recorded during the intervention phase.

Hypothesis 3: "Teachers Will Report Positive Ratings on the Intervention Rating Scale and Indicate that During the Intervention an Improvement Was Apparent in the Participants' On-Task Behavior as Measured by Mean Responses on a Six-Point Likert Scale"

Each participant's teacher was asked to complete the Intervention Rating Scale at the close of the intervention phase. (See Appendix B for a copy of the Intervention Rating Scale.) The questionnaire included the 24 statements from the Behavior Intervention Rating Scale (Elliott & Trueting, 1991) for which the teachers circled the best response on a scale of one through six, which ranged from "strongly disagree" to "strongly agree." Table 3 shows the 24 statements and the responses given by each teacher. Ratings are

Table 3

Teacher Responses on the Behavior Intervention Rating Scale (Elliot & Trueting, 1991)

1= Strongly Disagree 2= Disagree 3= Slightly Disagree
4= Slightly Agree 5= Agree 6= Strongly Agree

Statement	Teacher 1	Teacher 2	Teacher 3	Teacher 4 &6	Teacher 5	Mean
1. This was an acceptable intervention for the child's problem behavior.	6	6	5	6	6	5.8
2. Most teachers would find this intervention appropriate for behavior problems in addition to the one addressed.	6	5	6	6	6	5.8
3. The intervention proved effective in changing the child's problem behavior.	6	5	4	5	6	5.2
4. I would suggest the use of this intervention to other teachers.	6	5	6	6	6	5.8
5. The child's behavior problem was severe enough to warrant use of this intervention.	6	6	6	6	6	6
6. Most teachers would find this intervention suitable for the behavior problem addressed.	6	6	5	6	5	5.6
7. I would be willing to use this in a classroom setting.	6	6	6	6	6	6
8. The intervention did not result in negative side-effects for the child.	6	6	6	6	6	6
9. The intervention would be an appropriate intervention for a variety of children.	6	5	6	6	5	5.6
10. The intervention is consistent with those I have used in classroom settings.	6	5	5	4	1	4.2

Table 3 (continued)

Statement	Teacher 1	Teacher 2	Teacher 3	Teacher 4 & 6	Teacher 5	Mean
11. The intervention was a fair way to handle the child's problem behavior.	6	6	5	6	4	5.4
12. The intervention is reasonable for the behavior problem addressed.	6	6	5	6	6	5.8
13. I like the procedure used in the intervention.	6	5	6	6	6	5.8
14. This intervention was a good way to handle the child's behavior problem.	6	6	5	6	6	5.8
15. Overall, the intervention was beneficial for the child.	6	6	4	6	6	5.6
16. The intervention quickly improved the child's behavior.	6	5	4	5	4	4.8
17. The intervention will produce lasting improvement in the child's behavior.	5	4	4	5	5	4.6
18. The intervention improved the child's behavior to the point that it would noticeably deviate from other classmates' behavior.	5	5	3	5	4	4.4
19. Soon after using the intervention, a teacher would notice a positive change in the problem behavior.	6	5	4	5	5	5
20. The child's behavior will remain at an improved level even after the intervention is discontinued.	5	4	3	5	4	4.2
21. Using the intervention should not only improve the child's problem behavior in the classroom, but also in other settings (e.g., other classrooms, home).	6	6	3	5	5	5

Table 3 (continued)

Statement	Teacher 1	Teacher 2	Teacher 3	Teacher 4 & 6	Teacher 5	Mean
22. When comparing this child with a well-behaved peer before and after use of the intervention, the child's and the peer's behaviors are more alike after using the intervention.	6	6	4	4	5	5
23. The intervention produced enough improvement in the child's behavior so the behavior no longer is a problem in the classroom.	6	4	2	4	3	3.8
24. Other behaviors related to the problem behavior also are likely to be improved by the intervention.	6	5	3	5	3	4.4

also averaged across participants. Participants 4 and 6 were in the same class; therefore, their teacher completed only one questionnaire.

Overall, the teacher responses concerning the intervention package were positive. Only one item received an average score below a four or "slightly agree." The item was:

23. The intervention produced enough improvement in the child's behavior so the behavior no longer is a problem in the classroom.

All other items on the teacher questionnaire received a mean score of 4.2 or higher. These results indicate a positive overall level of satisfaction with the process, effect, and outcome of the intervention package.

The teachers were specifically asked about whether or not improvements in the participant's rates of on-task behavior were apparent while participating in the intervention by the following items on the questionnaire:

3. The intervention proved effective in changing the child's problem behavior.

15. Overall, the intervention was beneficial for the child.

16. The intervention quickly improved the child's behavior.

19. Soon after using the intervention, a teacher would notice a positive change in the problem behavior.

22. When comparing this child with a well-behaved child before and after the use of the intervention, the child's and the peer's behaviors are more alike after using the intervention.

The mean score for the items listed above was 5.12. This score indicates that the teachers did notice a positive change in the participants' on-task behavior during the intervention phase of this study.

Overall, the teachers reported positive ratings on the teacher questionnaire. More specifically, items that focused on whether or not the intervention had a positive effect on the participants' classroom behaviors were given positive ratings. These results indicate that the teachers involved in the study were able to observe an improvement in the participants' rates on-task behavior, as hypothesized in research hypothesis number 3.

Hypothesis 4: "Classroom Teachers Will Report Positive Ratings on the Intervention Rating Scale Regarding Participation in the Intervention as Measured by Mean Responses on a Six-Point Likert Scale"

Several of the items on the Behavior Intervention Rating Scale (Elliot & Trueting, 1991) are focused on the level of the level of satisfaction experienced by a teacher regarding participation in an intervention. These items include:

4. I would suggest the use of this intervention to other teachers.

6. Most teachers would find this intervention suitable for the behavior problem addressed.

7. I would be willing to use this in a classroom setting.

12. The intervention is reasonable for the behavior problem addressed.

13. I like the procedure used in the intervention.

14. This intervention was a good way to handle the child's behavior problem.

The mean rating for the items listed above was 5.8, which is equivalent to a rating of "strongly agree." The ratings for these items indicate that the teachers who were involved in the study viewed participation in the intervention very positively.

The questionnaires that each teacher completed also included open-ended questions concerning what they liked and disliked about the intervention package. The teacher of Participant 1 indicated that he liked the intervention package because it was "very positive for the student" and that while receiving the intervention, the student was made to "feel successful no matter what." It was also noted that the student's mother had commented that her student was doing a better job of "focusing when she's doing homework." The teacher wrote that he liked the MotivAider because it was "a quick easy way for the student to self-monitor themselves." One problem that was reported concerning the use of the MotivAider as part of the intervention was that the student "liked to play with it occasionally."

The teacher of Participant 2 indicated that what she liked about the intervention package was that "the student was responsible for his own self-monitoring and 'bought in' quickly to the program." It was also noted that the MotivAider was "a great 'gimick' that [the student] really liked using." The teacher's only dislike concerning the intervention was that she "could only use it with one student."

Teacher 3 indicated that what she liked about the intervention package was that "the child learns self-monitoring." It was also reported that she liked the MotivAider because "It does not distract or call attention to the student using it." The teacher's only dislike was that she wanted to use the intervention when she did not have to "start and stop on a time frame that is the same."

The teacher of Participants 4 and 6 indicated that she liked that the intervention "made the student think about their behavior." She also noted that she liked the

MotivAider because it "stops the user and reminds them to think of their behavior." The teacher did not indicate any dislikes concerning the intervention package.

The teacher of Participant 5 indicated that what she liked most about the intervention package was that her student "was on-task when he had the MotivAider" and that "it kept him focused to the point that at times there was so much distraction and he continued being on-task." The teacher did not indicate any dislikes concerning the intervention; however, she noted that she would have liked to use the MotivAider during "whole-class instruction."

Although a few negatives were indicated, in general, each teacher's comments concerning participation in the intervention package were positive overall. The comments that were made reflect the teacher's positive responses to the various items taken from the Behavior Intervention Rating Scale (Elliot & Trueting, 1991) concerning participation in the study. Overall, the positive responses from the teachers strongly support research hypothesis 4.

Hypothesis 5: "Participants Will Report Positive Ratings on the Modified Children's Intervention Rating Scale Regarding Participation in the Intervention as Measured by Mean Responses on a Six-Point Likert Scale"

Each participant involved in the intervention was asked to fill out The Children's Intervention Rating Scale at the end of the intervention phase of the study. (See Appendix B for a copy of the Children's Intervention Rating Scale.) The questionnaire included seven items that were based on the items found on the Children's Intervention Rating

Profile (Elliott, 1986) that had been modified by the researcher in order to better fit the purposes of this study. The participants were asked to give their best response to each item on a scale of one through six, which ranged from "strongly disagree" to "strongly agree." Table 4 shows the seven statements on the participant questionnaire and the response given by each participant. Ratings are also averaged across participants.

The participants were specifically asked if their experience with the intervention package was negative by the following items:

2. Watching the video and using the MotivAider was hard.

3. Watching the video and using the MotivAider caused problems with my friends.

4. There are better ways to help me to stay focused on my work.

Upon reviewing the participant's responses for the items listed above, Participant 5 did indicate that he felt that his participation in the intervention had caused some problems with his friends and that there might have been a better way to help keep him focused; however, the mean score for the items listed above was 1.5. This score indicates that overall, the participants did not feel that their participation in the intervention program was a negative experience.

The participants were specifically asked if their experience with the intervention package was positive and helpful by the following items:

1. Watching the video and using the MotivAider seemed fair.

5. This would be a good program to use with other kids.

6. I like this program to help me stay focused.

7. I think the videos and the MotivAider helped me do better in school.

Table 4

Participant Responses on the Children's Intervention Rating Scale

1= Strongly Disagree 2= Disagree 3= Slightly Disagree
4= Slightly Agree 5= Agree 6= Strongly Agree

Statement	Subject 1	Subject 2	Subject 3	Subject 4	Subject 5	Subject 6	Mean
1. Watching the video and using the MotivAider seemed fair.	6	6	6	6	6	6	6
2. Watching the video and using the MotviAider seemed hard.	1	1	1	1	1	1	1
3. Watching the video and using the MotivAider caused problems with my friends.	1	1	1	1	5	1	1.67
4. There are better ways to help me to stay focused on my work.	1	3	1	1	4	1	1.83
5. This would be a good program to use with other kids.	6	6	4	6	6	6	5.67
6. I like this program to help me stay focused.	6	6	6	6	6	6	6
7. I think the videos and the MotivAider helped me to do better in school.	6	6	6	6	6	6	6

The mean score for the items listed above was 5.92. This score indicates that overall, the participants felt that their experience with the intervention package was a positive one. This score also indicates that the participants felt that the intervention package had helped them to stay focused and do better in school.

The questionnaire that each participant completed also included open-ended questions about what they liked and disliked about the intervention package. When asked about what she liked about the MotivAider, Participant 1 stated, “It’s really fun to use. I stayed focused on my work and I didn’t talk.” She noted that one negative component about the MotivAider was that, “Sometimes it buzzed too much.” Concerning what she liked about the program in general, the participant stated, “It was fun. It made me stay focused. I like how the person draws in the video and watching the videos.” The participant did not indicate any negative aspects about participation in the intervention program.

In response to what he liked about the MotivAider, Participant 2 remarked, “It keeps me focused and it helps me study better.” Concerning what he liked about the program in general, the participant stated, “I liked the videos. They were cool, and I liked the prizes. I liked it because something finally steps in and helps me out.” The participant did not indicate any negative aspects about participation in the study.

Concerning the MotivAider, Participant 3 remarked, “I like how you can set it. It helped me stay on-task.” When asked what he liked about the program as a whole, the participant stated, “I liked watching the video. It was really fun. It really, really was.” The participant did not indicate any negative aspects concerning participation in the study.

When asked about what he liked about the MotivAider, Participant 4 stated, “It helped me stay focused.” When asked what he liked about the program as a whole, the participant remarked, “It was fun to do.” The participant noted that one negative aspect of the intervention package was that the videos were “boring.”

In response to what he liked about the MotivAider, Participant 5 noted that he liked that “it buzzes.” He noted that one negative component about the MotivAider was that it was “too big to wear” and that it “scratched” him. Concerning what he liked about the program in general, the participant stated, “I liked tracking my work.” The participant noted that one negative aspect of the intervention package was that the “movies were boring.”

Concerning the MotivAider, Participant 6 remarked, “ I like it because it kept me on-task.” When asked what he liked about the program as a whole, the participant stated, “After I did this I got treats. It helped my work and I like the videos.” The participant did not indicate any negative aspects concerning participation in the study.

Overall, the participants’ ratings concerning their experience with the intervention package were positive. Although a few negatives aspects were noted, the majority of comments that were made on the open-ended portion of the questionnaire were also positive. This response pattern is supportive of research hypothesis 5.

Hypothesis 6: "The Participants Will Indicate that the Intervention Sessions that They Took Part in Were Enjoyable and Beneficial to Them as Measured by Their Mean Responses on the Fun 'O' Meter"

At the end of each intervention session with the program implementer, the participants evaluated the session for helpfulness and fun by marking the Fun 'O' Meter. (See Appendix F for a copy of the Fun 'O' Meter.) On the Fun 'O' Meter, the participants could rate each session as falling into one of five different categories. These categories listed from most helpful to least helpful were: "Great", "Go For It!", "Getting Better", "Ouch!", and "No Help". For the purpose of evaluating the participants' ratings, each category was assigned a numerical value with "Great" receiving the value of 5 and "No Help" receiving a value of 1. Table 5 shows the average Fun 'O' Meter rating for each participant in the study.

Overall, the participants' mean rating for the intervention sessions conducted during the study was 4.85. Additionally, the participants' ratings do not vary significantly by site. At Site 1, the mean rating was 4.94 and at Site 2, the mean rating was 4.76. These scores indicate that the participants in the study viewed the intervention sessions as being both helpful and beneficial. The high ratings recorded by the participant in this study on the Fun 'O' meter support research hypothesis 6.

Table 5

Average Participant Fun 'O' Meter Ratings

1= No Help 2= Ouch! 3= Getting Better
4= Go For It! 5= Great!

Site 1

Participant 1	Participant 2	Participant 3
5	5	4.83

Site 2

Participant 4	Participant 5	Participant 6
4.57	4.71	5

Hypothesis 7: "The Participants' Academic Accuracy and Completion of Problems on Curriculum-Based Math Worksheets Will Increase Above Baseline Rates While They Are Participating in the Intervention as Measured by Mean Number of Items Completed and Mean Number of Items Solved Correctly"

During baseline, the participants in the study completed an average of 26 out of 60 problems per observation session. Out of all problems completed by the participants in the study during baseline, 55% were correct. The mean number of problems completed by all participants rose to 33 out of 60 during the intervention phase. Out of all problems completed by the participants in the study during the intervention phase, 79% were correct. These results indicate that the mean number of problems completed and the mean number of problems solved correctly did indeed increase during intervention as compared to baseline, which supports research hypothesis 7. In addition, at 3 weeks follow-up, the

average number of problems completed rose to 36 out of 60 items. Out of all of the problems completed during follow-up, an average of 84% were correct. The average number of problems completed by all participants during each phase of the study is compared in Figure 18. The accuracy of the problems completed by all participants during each phase is compared in Figure 19.

Site 1

During baseline, the participants at Site 1 completed an average of 25 out of 60 problems per observation session. Out of all problems completed by the participants at Site 1 during baseline, 54% were correct. The mean number of problems completed by the participants at Site 1 rose to 43 out of 60 problems during the intervention phase. Out of all problems completed by the participants at Site 1 during the intervention phase, 81%

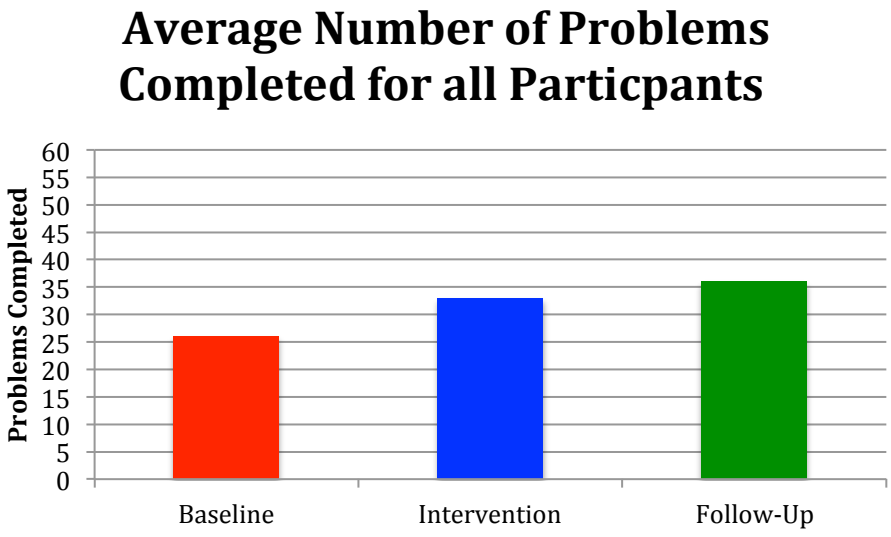


Figure 18. Mean Number of Problems Completed by All Participants From Baseline Through Follow-Up.

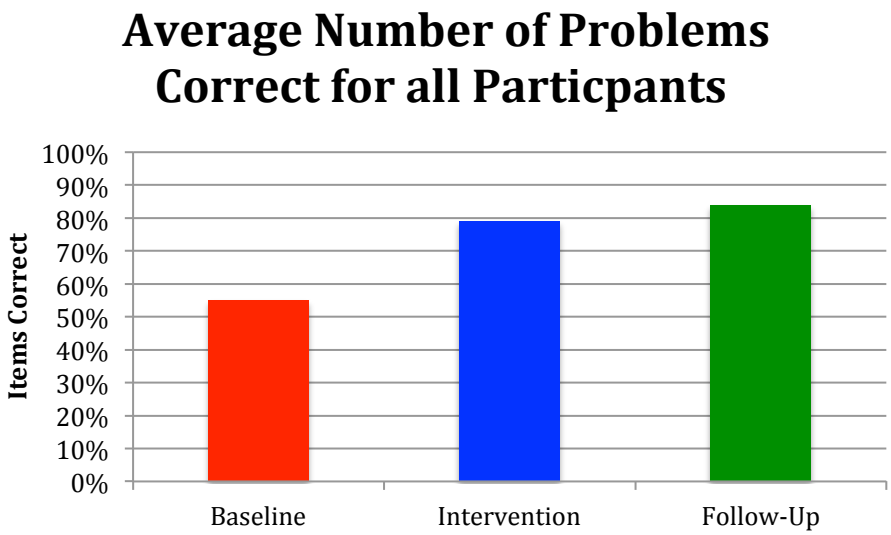


Figure 19. Percentage of Correct Problems Completed by All Participants in the Study from Baseline Through Intervention.

were correct. At 3 weeks follow-up, the participants at Site 1 completed an average of 38 out of 60 problems. Out of all of the problems completed during follow-up by these participants, an average of 76% were correct. The number of problems completed by the participants at Site 1 during each phase is compared in Figure 20. The accuracy of the problems completed during each phase is compared in Figure 21.

At baseline, Participant 1 completed an average of 18 out of 60 problems per observation session. Out of all problems completed by Participant 1 during baseline, 63% were correct. The mean number of problems completed by Participant 1 rose to 56 out of 60 during the intervention phase. Out of all problems that Participant 1 completed during the intervention phase, 88% were correct. At 3 weeks follow-up, Participant 1 completed an average of 60 of 60 problems. Of the problems completed at follow-up, 94% were correct.

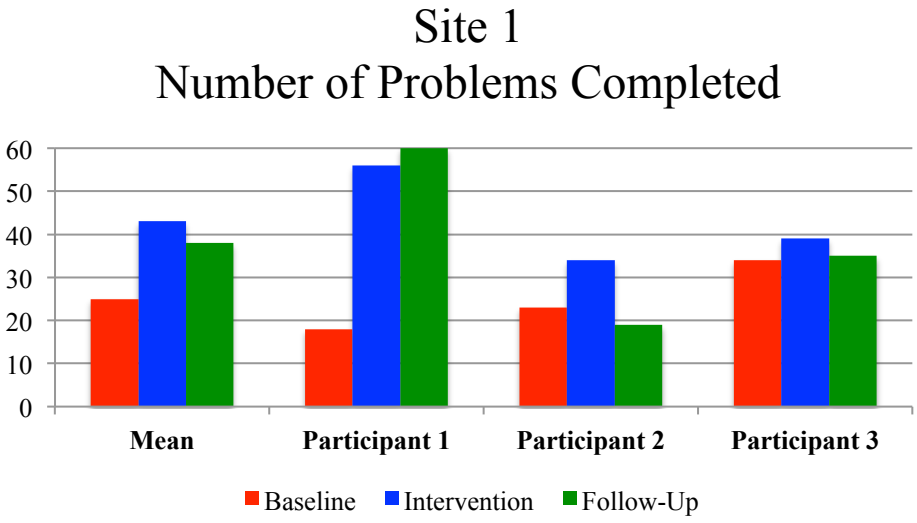


Figure 20. Average Number of Problems Completed by the Participants at Site 1 During Baseline and Intervention.

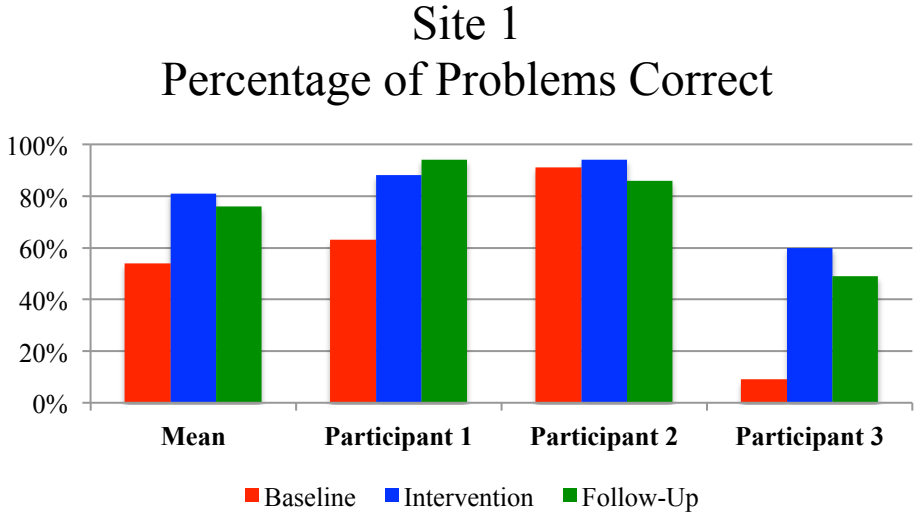


Figure 21. Percentage of Problems Completed Correctly During Baseline and Intervention at Site 1.

During baseline, Participant 2 completed an average of 23 out of 60 problems per observation session. Out of all problems completed by Participant 2 during baseline, 91% were correct. The mean number of problems completed by Participant 2 during the intervention phase rose to 34 out of 60 problems. Out of all problems that Participant 2 completed during the intervention phase, 94% were correct. At 3 weeks follow-up, Participant 2 completed an average of 19 out of 60 problems. Of the problems completed at follow-up, 86% were correct.

At baseline, Participant 3 completed an average of 34 out of 60 problems per observation session. Out of all problems completed by Participant 3 during baseline, 9% were correct. The mean number of problems completed by Participant 3 during the intervention phase rose to 39 out of 60 problems. Out of all problems that Participant 3 completed during the intervention phase, 60% were correct. At 3 weeks follow-up, Participant 3 completed an average of 35 out of 60 problems. Of the problems completed at follow-up, 49% were correct.

Site 2

During baseline, the participants at Site 2 completed an average of 28 out of 60 problems per observation session. Out of all problems completed by the participants at Site 2 during baseline, 55% were correct. The mean number of problems completed by the participants at Site 2 decreased to 23 out of 60 during the intervention phase. Out of all problems completed by the participants at Site 2 during the intervention phase, 77% were correct. At 3 weeks follow-up, the participants at Site 2 completed an average of 34 out of 60 problems. Out of all of the problems completed during follow-up by these

participants, an average of 91% were correct. The number of problems completed by the participants at Site 2 during each phase is compared in Figure 22. The accuracy of the problems completed during each phase is compared in Figure 23.

At baseline, Participant 4 completed an average of 60 out of 60 problems per observation session. It was noted by the observers that when Participant 4 was asked to complete his worksheets during the baseline phase, he quickly put random answers down for each item and then went back to being off-task. Out of all problems completed by Participant 4 during baseline, 1% were correct. The mean number of problems completed by Participant 4 decreased to 26 out of 60 during the intervention phase; however, his percentage of items completed correctly during the intervention phase rose to 46%. At 3 weeks follow-up, Participant 4 completed an average of 53 out of 60 problems. Of the problems completed at follow-up, 88% were correct.

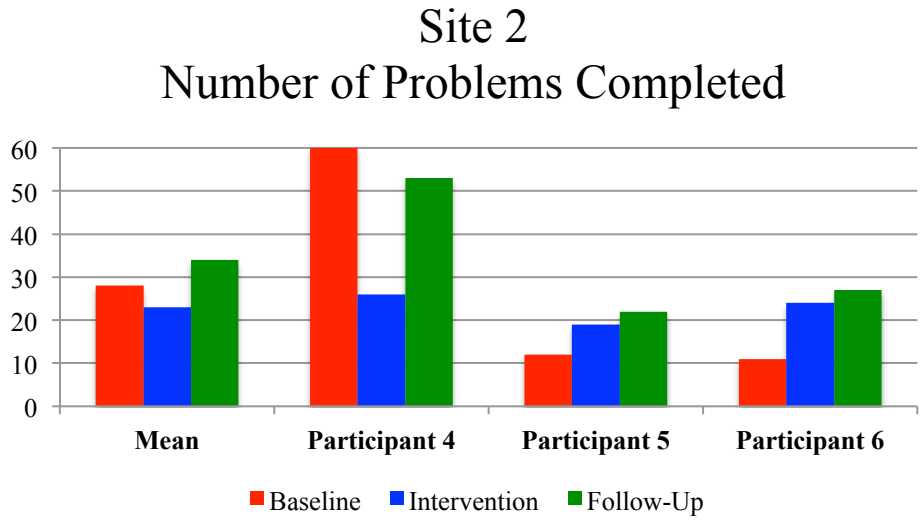


Figure 22. Average Number of Problems Completed by the Participants at Site 2 During Baseline and Intervention.

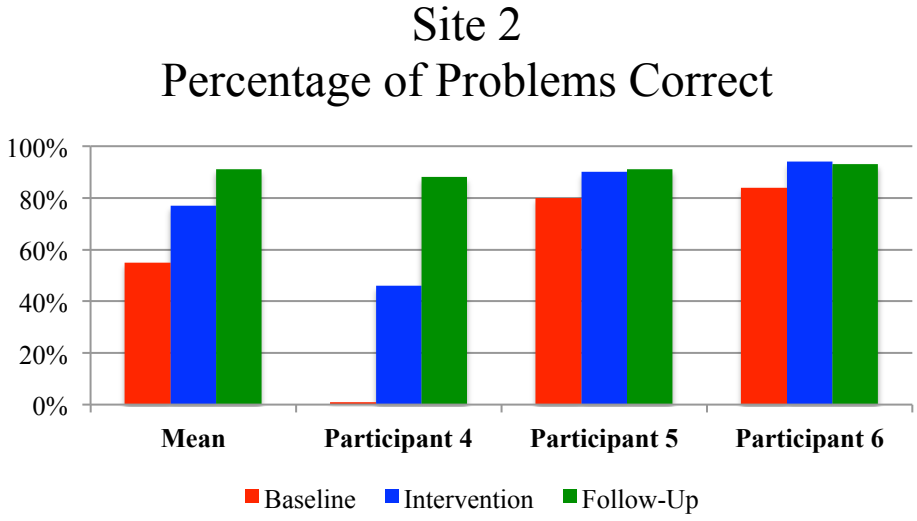


Figure 23. Percentage of Problems Completed Correctly During Baseline and Intervention at Site 2.

During baseline, Participant 5 completed an average of 12 out of 60 problems per observation session. Out of all problems completed by Participant 5 during baseline, 80% were correct. The mean number of problems completed by Participant 5 during the intervention phase rose to 19 out of 60 problems. Out of all problems that Participant 5 completed during the intervention phase, 90% were correct. At 3 weeks follow-up, Participant 5 completed an average of 22 out of 60 problems. Of the problems completed at follow-up, 91% were correct.

At baseline, Participant 6 completed an average of 11 out of 60 problems per observation session. Out of all problems completed by Participant 6 during baseline, 84% were correct. The mean number of problems completed by Participant 6 during the intervention phase rose to 24 out of 60 problems. Out of all problems that Participant 6 completed during the intervention phase, 94% were correct. At 3 weeks follow-up, Participant 6 completed an average of 27 out of 60 problems. Of the problems completed

at follow-up, 93% were correct. Table 6 compares the number of items completed and the number of items completed correctly for all participants from baseline through follow-up.

Accuracy of Participant Data on the Self-Plotting Graph

During each office intervention session, the participants reported their self-monitored rates of on-task behavior on the Self-Plotting Graph. Even though it was not included in the original research proposal hypotheses, the researcher felt it would be important to report the rate of on-task behavior as reported by each participant on their

Table 6

Academic Summary for All Participants

	Subject 1	Subject 2	Subject 3	Subject 4	Subject 5	Subject 6
Baseline Completed	18	23	34	60	12	11
Intervention Completed	56	34	39	26	19	24
Follow-Up Completed	60	19	35	53	22	27
Baseline Correct	63%	91%	9%	1%	80%	84%
Intervention Correct	88%	94%	60%	46%	90%	94%
Follow-Up Correct	94%	86%	49%	88%	91%	93%

Self-Plotting Graphs. Overall, the mean rate of on-task behavior recorded on the Self-Plotting Graphs for all participants involved in the study was 98%. During the intervention phase, the mean rate of on-task behavior displayed by all participants was actually observed to be at 68%. At Site 1, the mean rate of on-task behavior recorded by the participants on their Self-Plotting Graphs was 97%. During the intervention phase, the mean rate of on-task behavior was actually observed to be at 81%. At Site 2, the mean rate of on-task behavior recorded by the participants on their Self-Plotting Graphs was 99%. During the intervention phase, the mean rate of on-task behavior for the participants at Site 2 was actually observed to be at 54%. These results indicate that overall, the participants involved in this study overestimated their actual rates of on-task behavior. Table 7 compares each participant's self-reported mean rate of on-task behavior on their Self-Plotting Graph and their actual observed mean rate of on-task behavior during the intervention phase.

Table 7

Comparison of Self-Reported and Observed Rates of On-Task Behavior

Participant	Self-Plotting Graph	Observed Rate
1	96%	80%
2	97%	82%
3	99%	82%
4	99%	41%
5	99%	67%
6	99%	55%

Reliability

On-Task Observations

In order to assure interrater agreement, an observation training session was conducted. The two previously described observation training videos were then used in order to practice performing the observations. Practice observations were repeated until a minimum of .80 interrater reliability was achieved on each video. During each session, the observers were able to establish interrater reliability estimates higher that .80 for multiple observations while watching both videos. Tables 8 and 9 show the reliability estimates achieved while observing each video during the training session. Cohen's Kappa, which corrects for chance agreement, was used to calculate interrater reliability.

Table 8

Interrater Reliability for Training Video 1

Observation	Cohen's Kappa
1	.88
2	.91
3	.95

Table 9

Interrater Reliability for Training Video 2

Observation	Cohen's Kappa
1	.86
2	.95
3	1

The formula is as follows:

$$k = (Po - Pc) / (1 - Pc)$$

where: Po = the proportion of agreement between observers of occurrence and nonoccurrence

Pc = the proportion of expected agreement based on chance

In order to ensure that interrater agreement was maintained throughout the study, two observers collected data for each participant simultaneously during 33% of the observation probes conducted throughout the study. These observations occurred once while collecting baseline and follow-up data and three times while collecting intervention data for each participant. A reliability coefficient of .80 or higher was achieved between the observers during each of these observations. Table 10 shows the reliability estimates for each of these observations.

Table 10

Interrater Reliability Through All Phases of the Study

Observation	Subject 1	Subject 2	Subject 3	Subject 4	Subject 5	Subject 6
Baseline	.92	.85	.90	1	.87	.85
Intervention 1	.92	.84	.91	.95	.93	.86
Intervention 2	.93	.87	1	.95	.96	.97
Intervention 3	.88	.88	.92	.90	.90	.92
Follow-Up	1	.88	.90	.80	.88	1

Treatment Integrity

In order to help maintain treatment integrity, checklists based on the steps described in the On-Task in a Box Manual (Jenson & Sprick, in press) were used throughout the study. These checklists included the Orientation Session Checklist, the Intervention Session Checklist, and the Teacher Follow-Up Checklist. (See Appendix H for a copy of each checklist). The program implementer at each site checked off the items on these lists as they were completed during each respective session. A review of these checklists reveals that all steps were completed for each participant during each session for 100% treatment integrity.

DISCUSSION

Summary and Conclusions

Students who are struggling in the classroom have often been called "distracted, inattentive, lacking concentration, daydreaming, unfocused, or simply not paying attention" (Jenson & Sprick, in press). The American Academy of Pediatrics recently issued a position statement concerning the diagnosis, evaluation, and treatment of ADHD in children and adolescents (AAP, 2011). In this position statement, physicians were encouraged to consider "behavior therapy" and "behavior interventions" as evidence-based treatments to be used first or along with stimulant medication. Often times, students who are having difficulty in the classroom can be helped by using interventions designed to increase rates of on-task behavior in addition to academic coaching and positive reinforcement for working (Jenson & Sprick, in press). This may be especially true for students who "fall between the academic cracks" or in other words, students who would benefit from extra support at school but do not qualify for special education services (Jenson & Sprick, in press). Each of the participants involved in this study displayed extremely high rates of off-task behavior at baseline. However, each participant displayed increased rates of on-task behavior as well as improved academic achievement while participating in the package-ready program.

Each of the research hypotheses included in this study were affirmed. The first research hypothesis asserted that rates of on-task behavior would be higher after receiving the intervention package than during baseline. On-task behaviors for the participants in this study increased from a mean of 21% of the intervals observed during the baseline condition to a mean of 68% of the intervals observed during the intervention. Each participant experienced a substantial increase in their level of on-task behavior that coincided with their receipt of the treatment condition.

The second research hypothesis was that the participants' on-task rates would remain improved above baseline at follow-up observations after 3 weeks post-intervention. The data that were collected show that the participants were on-task for 21% of the intervals observed during the baseline condition. The data collected at 3 weeks follow-up indicates that the participants displayed on-task behaviors for 72% of the intervals observed. This result clearly indicates that the improvements in rates of on-task behaviors displayed by the participants 3 weeks after treatment was maintained.

The third research hypothesis stated that the teachers would report above average ratings on the Intervention Rating Scale and that during the intervention, an improvement was apparent in the participants' on-task behavior. The teacher responses to the 24 statements on the questionnaire that were taken from the Behavior Intervention Rating Scale (Elliot & Trueting, 1991) were overwhelmingly positive. More specifically, items that focused on the effect that the intervention package had on the participants' classroom behaviors were given positive ratings. This indicates that although classroom problems were not reduced completely, each teacher was able to observe an improvement in the participants' on-task behavior, as hypothesized in research hypothesis 3. The responses

given on the teacher questionnaire to items that focused on the level of satisfaction regarding participation in the intervention were also positive. This outcome supports the fourth research hypothesis, which stated that the classroom teachers would report ratings that were above average on the Behavior Intervention Scale regarding participation in the intervention.

The fifth research hypothesis stated that the participants would report above average ratings on the Children's Intervention Rating Scale regarding participation in the intervention. The questionnaire that the participants completed at the end of the study included seven items that were based on those found on the Children's Intervention Rating Profile (Elliot, 1986). The researcher modified the items in order to better fit the purposes of the study. The participants' responses to the items on the questionnaire were positive. Overall, the participants indicated that they did not believe that being involved in the intervention was hard or unfair. The participants' response pattern also showed that they believed the intervention helped them to stay focused and to do better work in the classroom. In addition, each participant's ratings on the Fun 'O' Meter indicated that the intervention sessions that they participated in were both enjoyable and beneficial, as stated in research hypothesis 6.

The last research hypothesis stated that the participants' academic accuracy and completion of problems on the curriculum-based math worksheets would increase above baseline rates while participating in the intervention. During baseline, the participants in the study completed an average of 26 out of 60 problems per observation session. Out of all problems completed by the participants in the study during baseline, 55% were correct. The mean number of problems completed by all participants rose to 33 during the

intervention phase. Out of all problems completed by the participants in the study during the intervention phase, 79% were correct. These results indicate that overall, the participants' academic accuracy and the number of problems that they were able to complete did increase while receiving the intervention, as indicated in hypothesis 7.

Study Comparisons

Self-Monitoring

The use of the intervention package compares favorably to studies that have used only self-monitoring as a means to decrease off-task behavior. Similar to the studies conducted by Mathes and Bender (1997), Amato-Zech et al. (2006), and Harris et al. (2005), the intervention package effectively increased rates of on-task behavior in students, who either had a previous diagnosis of ADHD, were receiving pharmacological intervention, or simply displayed high rates of off-task behavior in the classroom. Similar to the Amato- Zech (2006) study, the intervention package in the current study received high acceptability ratings from both teachers and students.

Amato-Zech et al. (2006) used a self-monitoring method that was similar to that used in the intervention package used in this study. As part of the treatment in Amato-Zech et al., the MotivAider was used as a self-monitoring prompt to increase on-task behaviors with 3 students in a special education classroom. The self-monitoring sessions were conducted while the participants were involved in writing instruction and independent writing activities. The results of the study indicated a steady increase in on-task behavior from 55% at baseline to more than 90% of the intervals observed during the treatment phase, which is a net percentage increase of about 35. Although the overall rate

of on-task behavior achieved by the participants in the current study was not as high as the results obtained by Amato-Zech et al. (2006), due to the fact that the participants in the current study started out with lower rates of on-task behavior at baseline, the overall gains achieved were slightly higher in the current study. The participants in the current study were only on-task during 21% of the intervals observed during baseline. While taking part in the intervention package, their rate of on-task behavior increased to 68% of the intervals observed. This represents a net percentage increase of 47.

Although follow-up data were not provided by Amato-Zech (2006), Legge et al. (2010) conducted a similar study in which follow-up data were provided. In this study, the MotivAider was used as a self-monitoring prompt to increase on-task rates in children with autism and other disabilities. The results of the study indicated that the rates of on-task behavior achieved by the participants were maintained 3 weeks after the intervention was terminated. These results are also comparable to the current study where the participants' overall rate of on-task behavior did not differ substantially at 3 weeks post-intervention from those displayed during the intervention phase.

Video-Modeling

The effectiveness of the intervention package to increase on-task behavior that was demonstrated in the current study is similar to findings in other studies that involved video-modeling. Studies involving video-modeling as a key component conducted by Kehle et al. (1986), Clare et al. (2000), Richards (2002), and King (2012) each produced substantial increases in on-task behavior similar to those found in the current study. Like previous studies that have used video-modeling, the package intervention in this study

proved effective for students in a regular education setting (King, 2012; Possell et al. 1999). A common theme of the previously reviewed video-modeling studies was that the rates of on-task behavior achieved during treatment were maintained posttreatment (Clare, 1992; King, 2012; Richards, 2002). These findings are also consistent with the results of the current study where 3 of the participants maintained or increased their gains in on-task behavior at 3 weeks postintervention.

The manner in which the peer-modeling video treatment sessions were conducted by Clare (1992), Richards (2002), and King (2012) are very similar to the peer-modeling procedures in the current study. In the Richards (2002) study, 3 participants watched eight different peer-modeling videos over a 2-week period. Similar to the current study, each video was approximately 5 minutes in length. Each participant watched the videos one-on-one with the researcher and during the course of the video session, the researcher followed a conversational protocol. Like the current study, the results of the Richards (2002) study were positive. The mean baseline on-task rate for the participants was observed to be at 40%. During the intervention, the rate improved to 65%. Furthermore, social validity data collected at the end of the study indicated that both teachers and participants were satisfied with both the procedure and the results of the intervention. These results are similar to those found in the current study, both in relation to the improvements made in on-task performance and the positive reception of the intervention by teachers and participants.

Combined Interventions

The author is aware of two other studies that have used an intervention package, which used video-modeling and self-monitoring simultaneously for each participant (Clare, 1992; King 2012). As described previously, Clare (1992) used self-modeling and peer-modeling separately with two different groups of participants to increase rates of on-task behavior over a period of 3 weeks. During the last 5 days of the study, a self-monitoring intervention was added to the treatment condition for each group.

The effectiveness of the interventions used for both groups of participants in the Clare study (1992) was similar to the current study in that substantial gains in rates of on-task behavior were achieved. The participants in the peer-modeling condition had rates of on-task behavior that rose from 32% of the intervals observed at baseline to 88% during treatment. The participants in the self-modeling condition had rates of on-task behavior that rose from 33% of the intervals observed at baseline to 86% of the intervals observed during treatment. The addition of the self-monitoring intervention during the last 5 days of the study did slightly increase rates of on-task behavior in both groups to about 90% of the intervals observed. Similar to the current study, consumer satisfaction data indicated that participants and teachers involved in the study were pleased with the procedures involved in the intervention.

As previously described, King (2012) conducted a study in which a package intervention similar to On-Task in a Box was used to increase rates of on-task behavior. During the intervention phase, each participant was involved in a self-monitoring intervention during his or her independent math time. During this time, the participants utilized the MotivAider set to prompt at random 1-minute intervals along with a self-

monitoring form. Additionally, each participant was involved in a self- and peer-model intervention throughout the intervention phase. Each video-modeling session lasted approximately 12 minutes in length with the video viewing taking up about 5 minutes of each session. The researcher made frequent verbal coaching statements before, during, and after viewing each video.

Similar to the current study, substantial gains in on-task behavior were achieved in the King (2012) study. At baseline, the participants were observed to be on-task during 47% of the intervals observed. During the intervention, the participants' rate of on-task behavior rose to 85% of the intervals observed. Similar to the current study, consumer satisfaction data from participants and teachers were positive and rates of on-task behavior remained above those observed at baseline at 3 weeks postintervention.

Site Comparison for Rates of On-Task Behavior

Although the participants at both sites made gains in on-task behavior, the participants at Site 1 achieved a higher rate of on-task behavior during intervention. At baseline, the participants at Site 1 were observed to be on-task during 31% of the intervals observed. While receiving the intervention, the mean rate of on-task behavior for the participants at Site 1 rose to 81%. This represents a net percentage increase of 50. In comparison, the participants at Site 2 were observed to be on-task during 11% of the intervals observed during baseline and 54% of the intervals observed during intervention. This represents a net percentage increase of 43.

There are several reasons why this difference may have occurred. One reason may be due to differences in the program implementer. The researcher was the program

implementer at Site 1 and the volunteer school psychologist was the program implementer at Site 2. However, in order to help maintain treatment integrity, checklists based on the steps described in the On-Task in a Box Manual (Jenson & Sprick, in press) were used throughout the study. (See Appendix H for a copy of each checklist.) The program implementer at each site checked off the items on these lists as they were completed during each respective session. A review of these checklists reveals that all steps were completed for each participant during each session. Therefore, it appears unlikely that the differences in rates of on-task behavior achieved were due to the manner in which the program was implemented at each respective site.

The difference in on-task rates achieved at each site may be due to the rates of on-task behavior displayed by the participants at baseline. Although the rates of on-task behavior displayed by each of the participants was low, overall, these rates were much lower for the participants at Site 2. At baseline, the participants at Site 2 were only observed to be on-task for 11% of the intervals observed. Because they started out at such a low rate, it could be that they may have required more time in order to reach the rates of on-task behavior achieved by their peers at Site 1. The manual for On-Task in a Box (Jenson & Sprick, in press) suggests that the program be implemented for 4-6 weeks. The participants in this study took part in the intervention program for approximately 4 weeks. If the participants at Site 2 were given an additional 2 weeks of intervention, it may be that their rates of on-task behavior would have been more comparable to the rate achieved by their peers at Site 1.

Finally, the discrepancy between the rates of on-task behavior achieved at each site may have been due to the rate of on-task behavior displayed by the participants'

classmates. During the intervention phase, the peers of the participants at Site 1 were on-task for 86% of the intervals observed. In comparison, the peers of the participants at Site 2 were observed to be on task for only 79% of the intervals observed. More specifically, Participants 4 and 6 at Site 2 were in the same classroom. During the intervention phase, their peers were observed to be on-task 74% and 75% of the intervals observed, respectively. The lower rates of on-task behavior displayed by peers in the classroom of Participants 4 and 6 at Site 2 may have contributed to their lower rates on-task behavior. The low rates of on-task behavior displayed in these participants' classroom indicate that there was a possible class wide on-task problem. Implementing a group intervention in this classroom may have been of benefit before starting On-Task in a Box with individual students (Jenson and Sprick, in press; Rhode, Jenson, & Reavis, 2010).

Site Comparison for Academic Performance

Ducharme and Schecter (2011) have indicated that interventions that target basic behaviors essential for classroom success, like a student's ability to remain on-task, are likely to produce covariant positive effects such as increases in in academic achievement. King (2012) conducted a study in which video-modeling and self-monitoring procedures were used as part of a package intervention in order to increase on-task behavior. The package intervention proved effective in increasing the participants' rates of on-task behavior. In addition, teacher report concerning the intervention package indicated that they believed that the participants' academic performance had improved during the course of the intervention. However, the study was not able to effectively confirm

whether or not the participants' academic abilities had in fact increased during the intervention.

The current study improved upon the previous study conducted by King (2012) by recording the accuracy and completion of problems on the M-CBM worksheets completed by the participants throughout each phase of the study. The findings of this study indicate that the On-Task in a Box program not only increased the participants' rates on-task behavior, but also resulted in increases in academic performance. As a whole, during the intervention phase, the participants average number of problems completed rose from 26 out of 60 to 33 out of 60. In addition, their accuracy rose from an average of 55% to 79% correct during the intervention phase.

As has been previously described, the rates of on-task behavior achieved at Site 1 were greater than the rates of on-task behavior achieved at Site 2. As would be predicted by Ducharme and Shecter (2011), greater gains in academic achievement were also observed at Site 1. During the intervention phase, the participants at Site 1 completed an average of 43 problems with an average of 81% of those problems being correct. At Site 2, the participants completed an average of 23 problems with an average of 77% of those problems being correct. These findings indicate that the site that was able to achieve a higher rate of on-task behavior was also able to achieve a higher completion rate with greater accuracy.

Contributing Factors

The success of the intervention package on increasing rates of on-task behavior and in turn academic performance is not surprising given the previous research in self-

monitoring and video-modeling interventions described above. Both self-monitoring and video-modeling have been proven as a successful intervention for increasing on-task behavior in the classroom (Harris et al., 2005; Richards et al., 2010). As part of the On-Task in a Box intervention, participants use these interventions simultaneously. Therefore, it is difficult to know the exact cause or causes for the increases in on-task behavior displayed by each participant. Although exact causes cannot be delineated, several factors may have contributed to the success of the intervention package.

As previously mentioned, the intervention package has a strong self-monitoring and recording component. In *The Tough Kid Toolbox,* Jenson, Rhode, and Reavis (1995) note that, the very act of marking down and keeping track of a target behavior will often by itself change how often the behavior occurs. Throughout the intervention phase, each participant was responsible for assessing and marking down their own rates of on-task and off-task behavior each time they received a prompt from the MotivAider. These behavioral self-evaluations were then recorded by the participants on a form that had been placed on their desk. In addition, during each intervention session with the program implementer, the participants also marked their rates of on-task behavior on the Self-Plotting Graph. When an individual collects data concerning their own behavioral tendencies, their unconscious or impulsive behavioral patterns are interrupted and temporarily change. This behavioral interruption is a phenomenon called reactivity (Reavis et al., 1996). Reactivity effectively changes the target behavior that is being self-monitored and provides a window of opportunity to consciously change a behavior (Reavis et al., 1996). Thus, each time the participants self-monitored their own on-task and off-task behaviors, their unconscious or impulsive behavioral patterns were

temporarily interrupted. This momentary interruption then provided them with the opportunity to consciously choose more desirable behaviors such as those viewed on the video-modeling recordings.

Another factor that may have contributed to the success of the intervention package is an increased sense of self-efficacy provided by the video-modeling interventions. According to Bandura (1997), self-efficacy is the sense or belief that one can succeed and is an important factor is promoting learning. In summarizing some of Bandura's (1982, 1986) works concerning self-efficacy, Schunk and Hanson (1989) noted that an individual's sense of self-efficacy influences their choice of activity, the amount of effort they are willing to expended, their level of persistence, and task accomplishments. Observing similar models (Schunk, 1987) and or oneself (Schunk & Hanson, 1989), performing a targeted task successfully can increase an individual's sense of self-efficacy. Observing others succeed conveys a message to an observing student that he or she is capable and can motivate them to attempt a task (Schunk, 1991). Additionally, the use of multiple models decreases the likelihood that the observer can discount the successful behaviors of a single peer (Schunk 1987). In the current study, the participants watched similar age, same gender peers displaying appropriate on-task behavior in the classroom while working on independent seatwork. These observations could have raised the participants' sense of self-efficacy, thus raising their beliefs that they could display the modeled behavior in the classroom.

On-Task in a Box is also designed to be a very positive experience for the student involved. In fact, describing the student's progress and being positive are important motivational components of the intervention (Jenson & Sprick, in press). During the

program, each time a teacher collects the Self-Monitoring Form from a student, they are encouraged to praise the student's progress. In addition, during each intervention session, there are multiples times when the program implementer offers praise and positive comments to the student. For example, a student receives praise when they bring an academic assignment to each session, while marking their progress on the Self-Plotting Graph, while watching the peer-modeling videos, and after completing each intervention session. Adult praise is an effective form of positive reinforcement that helps communicate recognition for appropriate behaviors (Bowen, Jenson, & Clark, 2004). In fact, increasing the amount of teacher praise that a student receives has been found to be helpful in increasing rates of on-task behavior and enhancing academic grades (Reavis et al., 1996). Therefore, it is likely that the increased rates of positive praise that the participants received while participating in On-Task in a Box package intervention had a positive impact on their rates of on-task behavior as well as their gains in academic achievement.

Limitations

A strength of the On-Task in a Box intervention used in the current study is that it utilizes several research-based techniques to increase rates of on-task behavior and thereby increases academic achievement; however, it also causes certain limitations in interpreting study results. Because the intervention package uses several research-based interventions simultaneously, it is difficult to determine which of the intervention components was most effective. It is also difficult to determine whether or not using

multiple interventions had an additive effect in increasing rates of on-task behavior versus using only one of the intervention techniques.

The findings in this study are also limited by the small sample size. Although the study took place in two separate schools, only 6 participants in the second and third grades took part in the intervention package. The small sample size calls into question the generalizability of these results to other participants or age groups. Replication and further study across a wider variety of participants would be needed before inferences or generalizations can be made.

Overall, the participants in this study were more accurate and completed more problems on their math worksheets while participating in the On-Task in a Box program. However, it is possible that practice effects could have contributed to these results. By the end of the follow-up phase, each participant had worked on 15 separate curriculum-based math worksheets that contained the same math skill throughout. Thus, the resulting practice on the math concepts contained on each worksheet could have contributed to the gains in accuracy and items completed by the participants.

Another possible limitation could be the fact that the researcher and volunteer school psychologist, who were also the program implementers at each site, were the primary observers throughout each phase of the study. Due to this fact, reactivity on the part of the participants to the observer's presence could have occurred during the intervention and follow-up phases. The use the multiple-baseline multiple-probe design was employed in order to help decrease the likelihood of reactive results. Additionally, because the program implementers at each site also served as observers, there is also the possibility of observer bias. However, two observers were used during 33% of the

observation probes that were conducted throughout the study and interrater agreement was shown to be high.

Finally, various treatment checklists were used throughout the study. The purpose of these checklists was to help maintain treatment integrity throughout the study. However, treatment integrity data were collected solely by the program implementer at each site and there was not an independent rater who checked for treatment integrity.

Future Research

Upon examining the results of the present study, several possibilities come to mind when considering future directions for research. The results of the present study suggest that the use of the intervention package was successful in increasing on-task behavior and academic performance during independent seatwork in math. Consumer feedback from some of the teachers indicated that they would have liked to use the intervention package during other classroom activities. A suggested course for additional research would be to track the intervention's ability to increase on-task behavior and academic achievement during various classroom activities such as reading and writing activities.

Throughout the current study, On-Task in a Box (Jenson & Sprick, in press) was used with each participant individually. However, research indicates that whole class behavioral contingencies can also be used to effectively promote positive behavior (Leflot, Leir, Onghena, & Coplin, 2013). The program manual indicates that On-Task in a Box can also be used with two students working as "buddies" or as a whole class contingency. A suggested course in designing additional research would be to set up a

study that uses one or all of these program options. The effectiveness and acceptability of these alternative program options to increase rates of on-task behavior and academic performance could then be determined. The results obtained from each of these program options could also be compared and contrasted with the current study.

The present study only used peer-model videos during the intervention sessions. However, in the On-Task in a Box manual, the option of using self-modeling videos mixed in with the peer-modeling videos is also given. A suggested direction in designing additional research would be to compare the effectiveness of implementing On-Task in a Box only using peer-modeling videos and when using both peer- and self-modeling videos. It could then be determined whether or not the addition of self-modeling videos would add to the effectiveness and acceptability of the program.

It is also possible that the simultaneous use of the interventions used in the On-Task in a Box intervention had an additive effect, which was greater than the use of the interventions individually. Future research is needed to clarify the effects of modeling and monitoring procedures on rates of on-task behavior alone and in combination. A suggested course in designing future research would be to compare the on-task rates of participants who were taking part in the On-Task in a Box intervention to participants who were only using a video-modeling, or self-monitoring intervention.

School psychologists are often consulted by teachers in regard to off-task behaviors displayed by multiple students in their classrooms. On-Task in a Box is a pre-assembled intervention that contains everything needed to implement research-based interventions. It also requires very little time to implement. Another direction for future study would be to provide the program to multiple school psychologists or school

professionals who work with teachers to help manage problematic classroom behaviors. Feedback and data obtained by these professionals could then be obtained and compared to the current study to see if similar results could be obtained.

APPENDIX A

CONSENT LETTERS

Parental Permission for Initial Observation

Dear Parent:

Purpose: The purpose of this study is to increase the on-task behavior and enhance the academic achievement of students who display high rates of off-task behavior in the classroom. In order to determine if your student would be a good candidate for participation in this study, I would like permission for trained graduate students or school professionals to observe your child in his or her classroom.

Procedure: With your permission, these persons will observe and record the percentage of time that your child spends paying attention to his or her academic work. Every effort will be made during these observations not to set any child apart from the other students. The students will know that someone is visiting their class, but will not know that any one student is being observed specifically.

After the observations have been completed, the researcher will contact you with the results. At that time, the researcher will let your know if your child is considered to be a good candidate for the study. Only a limited number of students will be able to participate in the study. If it is observed that your child would be a good candidate, the researcher will explain the procedures involved in the intervention program and invite you to have your child participate in the study. If you choose not to have your child participate or if your child is not observed to be a good candidate for the study, you will still be given the option of having the researcher provide you or your child's teacher with consultation concerning your child's classroom behavior.

Duration: The observations will be conducted during regular school hours while the students are engaged in academic work. Each observation is recorded for 15 minutes, and a total of three observations are needed from three different days.

Confidentiality: Only your child's first name will be recorded on the observation form. Observation forms of students who do not participate in the study will be destroyed. Methods for maintain confidentiality of students who do go on to participate in the study will be communicated to you prior to you making a decision regarding being included in the study.

Risk/Benefits: Potential risks involved in class observation include disruption to the class and embarrassment or self-consciousness at having someone watch the class. Potential benefits include the opportunity to participate in a research project designed to increase on-task behavior and academic achievement in the classroom.

Withdrawal: After giving initial consent, consent can be withdrawn at any time by sending a written note to your child's teacher asking that no further observations be done on your child and/or calling me at 801-567-8208. If you withdraw consent, any observation forms that have already been filled out on your child will be destroyed immediately.

Person to Contact: If you have questions, complaints or concerns about this study, you can contact Brian King at 801-567-8208. If you feel you have been harmed as a result of participation, please call my faculty advisor Dr. William R. Jenson at 801-581-7148. If Dr. Jenson is unavailable please leave a message and your call will be returned as soon as possible.

Institutional Review Board: Contact the Institutional Review Board (IRB) if you have questions regarding your child's rights as a research participant. Also, contact the IRB if you have questions, complaints or concerns that you do not feel you can discuss with the investigator. The University of Utah IRB may be reached by phone at (801) 581-3655 or by e-mail at irb@hsc.utah.edu.

Research Participant Advocate: You may also contact the Research Participant Advocate (RPA) by phone at (801) 581-3803 or by email at participant.advocate@hsc.utah.edu.

It is up to you to decide whether to allow your child to take part in this study. Refusal to allow your child to participate or the decision to withdraw your child from this research will involve no penalty or loss of benefits to which your child is otherwise entitled nor will it affect your or your child's relationship with the investigator. There are no costs or compensation for study participation.

Your permission to observe your child in class will be greatly appreciated. I hope that the study will prove helpful for many children.
Sincerely,

Brian King
Graduate Student in Educational Psychology
University of Utah

CONSENT:
By signing this consent form, I confirm that I have read the information in this parental permission form and have had the opportunity to ask questions. I will be given a signed copy of this parental permission form. I voluntarily agree to allow my child to be observed in his or her classroom as part of this study.

_____
Child's Name

_____
Parent/Guardian's Name

_____ _____
Parent/Guardian's Signature Date

_____
Relationship to Child

_____
Name of Researcher or Staff

_____ _____
Signature of Researcher or Staff Date

Parent Consent for Study Participation

Background
The purpose of this study is to increase the participants' on-task behavior and academic achievement in the classroom. This study will involve having each participant watch a short video of other children modeling sustained attention to their schoolwork. As part of the study, each participant will also be given a small device called a MotivAider that they will wear while working on independent seatwork in class. The device is about the size of a beeper and silently vibrates at random to remind the participant to remain focused on their schoolwork. The MotivAider will only be used while students are working on independent seatwork in math. One goal of this study is to increase each participant's ability to remain on-task in the classroom by having them watch same-age peers modeling appropriate on-task behavior and then having them monitor their own classroom behavior. By increasing the time that each participant remains focused on his or her work, it is also the goal of this study to enhance the participant's academic performance.

Study Procedure
Participating in the study would include the following: 1) continued classroom observations, 2) taking your child to a quiet room to watch a video recording of peers modeling appropriate on-task behavior, 3) your child bringing classroom assignments to the researcher or a trained school professional to be reviewed 4) your child receiving coaching, encouragement, and reinforcement from the researcher or a trained school professional, 5) your child wearing the MotivAider during independent seatwork time in class and monitoring their own ability to remain focused on academic work, 6) making copies of your child's math worksheets, 7) the researcher or a trained school professional periodically consulting with the teacher concerning your child's classroom behavior, 8) your child filling out a brief questionnaire about being in the study, and 9) having the classroom teacher fill out a brief questionnaire about the study. You may preview these questionnaires if you wish.

Watching the video recordings and interactions with the researcher or a trained school professional during the video sessions will involve your child being absent from the classroom for about 15 minutes a day, 2 to 3 times a week for approximately 4 weeks. During this time the child will also be using the MotivAider in class to help them self-monitor their behavior while doing independent seatwork in math. At the end of the four weeks, your child and their teacher will be asked to fill out a brief questionnaire about the study. This should only take about 10 minutes. The child will be observed in the classroom multiple times before and during the weeks that he or she is watching the modeling videos and using the MotivAider. Follow-up observations of your child will be conducted approximately 3 weeks after your child's last video session.

Risks
Participation in this study is completely optional, and at your own discretion. If you think you would like your child to participate, I would appreciate it if you would discuss it with him/her and include him/her in making this decision. The major disadvantage is your child feeling singled out as being inattentive or disruptive. Your child may also feel uncomfortable about being removed from the classroom.

Benefits
Possible benefits from participating in the study include focusing more on school work, which could in turn help them feel better about themselves and school, as well as the possibility of increasing his or her academic performance.

Confidentiality
Observation forms will only contain the child's first name, written in pencil. After the study is completed, data will be analyzed and each child will be assigned a letter name such as "Participant A" or "Participant B", etc. Names on the original observation recording forms and the math worksheets collected during the study will be changed to their assigned letter name, and the participants will only be referred to by their assigned letter name when reporting the results of this study. Except for the original consent forms; no documents will be kept that contain your child's name. The researcher will keep the consent forms secure in a locked file in his office.

Person to Contact
If you have questions, complaints, or concerns about this study, you can contact Brian King at 801-567-8208. If you feel you have been harmed as a result of participation, please call my faculty advisor Dr. William R. Jenson at 801-581-7148. If Dr. Jenson is unavailable please leave a message and your call will be returned as soon as possible.

Institutional Review Board: Contact the Institutional Review Board (IRB) if you have questions regarding your rights as a research participant. Also, contact the IRB if you have questions, complaints or concerns that you do not feel you can discuss with the investigator. The University of Utah IRB may be reached by phone at (801) 581-3655 or by e-mail at irb@hsc.utah.edu.

Research Participant Advocate: You may also contact the Research Participant Advocate (RPA) by phone at (801) 581-3803 or by email at participant.advocate@hsc.utah.edu.

Voluntary Participation
It is up to you to decide whether to allow your child to take part in this study. Refusal to allow your child to participate or the decision to withdraw your child from this research will involve no penalty or loss of benefits to which your child is otherwise entitled nor will it affect you or your child's relationship with the investigator.

Costs and Compensation to Participants
There are no costs or compensation for study participation. The anticipated conclusion of this study is Spring 2013. After the study is completed, I would be happy to share the results with you, as well as any possible recommendations for your child.

CONSENT
By signing this consent form, I confirm that I have read the information in this parental permission form and have had the opportunity to ask questions. I will be given a signed copy of this parental permission form. I voluntarily agree to allow my child to take part in this study.

_____
Child's Name

_____
Parent/Guardian's Name

_____ _____
Parent/Guardian's Signature Date

_____
Relationship to Child

_____
Name of Researcher or Staff

_____ _____
Signature of Researcher or Staff Date

Assent to Participate in the Study

Purpose of the Research
We would like to ask you to be in a research study because we are trying to learn more about how to help students to stay focused on their work and to do better on their assignments.

What We Will Ask You To Do
If you are willing to be in this study, you will be taken out of your classroom 2 or 3 times a week for about 15 minutes each time. When you are out of class you will watch videos of other students working on their assignments. During this study you will also be given a small buzzer called a MotivAider to wear while you are working in class to help you to remember to keep working on your assignments. At times there will be researchers in your classroom observing the class. At the end of this study we will ask you questions about how you liked being in this program. These activities will last about 4 weeks.

Risks
It is possible that being part of this study may make you feel like you are different because it is difficult for you to stay focused on your assignments. You may also feel uncomfortable being removed from your classroom.

Benefits
Being in this study will help us to understand if the different activities that we do in this study will help students to stay focused on their assignments. Being in this study may also help you to keep focused on the work your teacher gives you, finish more of your work, and help you to feel better about your ability to do well at school.

Being In This Study Is Your Choice
If you don't want to be in this study, you don't have to be in it. Remember, being in this study is up to you and no one will be upset if you don't want to be in it. You can change your mind later if you want to stop. Please talk about this with your parents before you decide if you would like to do it. We will also ask your parents to give their permission for you to be in this study. Even if your parents say "yes" you can still decide not to do this.

Confidentiality
All of the information from this study will be kept locked up in my office so that only the people helping me with this project will see them. Your name will not be used on any papers that people other than those helping me on this project will see.

Person to Contact
You can ask any questions that you have about the study. If you have a question later that you didn't think of now, you can call me (Brian King 801-567-8208) or ask me next time we meet.

Consent
Signing my name at the bottom means that I agree to be in this study. My parents and I will be given a copy of this form after I have signed it.

Printed Name

Sign your name on this line | Date

Printed Name of Person Obtaining Assent

Signature of Person Obtaining Assent | Date

The following should be completed by the study member conducting the assent process if the participant agrees to be in the study. Initial the appropriate selection:

_____ The participant is capable of reading the assent form and has signed above as documentation of assent to take part in this study.

_____ The participant is not capable of reading the assent form, but the information was verbally explained to him/her. The participant signed above as documentation of assent to take part in this study.

Teacher Consent Form

Background
The purpose of this study is to increase students' on-task behavior and academic achievement in the classroom. This study will involve having each student watch a short video of other children modeling sustained attention to their schoolwork. As part of the study, each student will also be given a small device called a MotivAider that they will wear while working on independent seatwork in class. The device is about the size of a beeper and silently vibrates at random to remind the student to remain focused on their schoolwork. The MotivAider will only be used while students are working on independent seatwork in math. One goal of this study is to increase each student's ability to remain on-task in the classroom by having them watch same-age peers modeling appropriate on-task behavior and then having them monitor their own classroom behavior. By increasing the time that each student remains focused on his or her work, it is also the goal of this study to enhance the student's academic performance.

STUDY PROCEDURE
Your participation in this study would include the following: 1) collecting and gathering the self-monitoring materials for use by your student during independent seatwork time in math, 2) scheduled observations being conducted in your classroom during independent seatwork time in math, 3) your student leaving the classroom periodically in order to participate in intervention sessions, 4) weekly meetings with the researcher concerning the intervention program, and 5) completion of a brief questionnaire concerning the intervention.

RISKS
Participation in this study is completely optional, and at your own discretion. Participation in the study may result in loss of time due to participation in weekly meetings and completion of the questionnaire. Your student may also require assistance when first learning how to use the MotivAider in the classroom, which may also result in a loss of your time.

BENEFITS
Possible benefits from participating in the study include increases in your student's ability to focus on schoolwork, which could in turn help them to feel better about themselves and school. Increased time spent focused on schoolwork could also lead to increases in academic performance.

CONFIDENTIALITY
After the study is completed, data will be analyzed and each student and teacher will be assigned a corresponding letter name such as "Participant A" and "Teacher A", etc. Names on the original observation recording forms, math worksheets, and questionnaires collected during the study will be changed to their assigned letter name, and the students and teachers will only be referred to by their assigned letter name when reporting the results of this study. Except for the original consent forms; no documents will be kept that contain your name. The researcher will keep the consent forms secure in a locked file in his office.

Person to Contact
If you have questions, complaints, or concerns about this study, you can contact Brian King at 801-567-8208. If you feel you have been harmed as a result of participation, please call my faculty advisor Dr. William R. Jenson at 801-581-7148. If Dr. Jenson is unavailable please leave a message and your call will be returned as soon as possible.

Institutional Review Board: Contact the Institutional Review Board (IRB) if you have questions regarding your rights as a research participant. Also, contact the IRB if you have questions, complaints or concerns that you do not feel you can discuss with the investigator. The University of Utah IRB may be reached by phone at (801) 581-3655 or by e-mail at irb@hsc.utah.edu.

Research Participant Advocate: You may also contact the Research Participant Advocate (RPA) by phone at (801) 581-3803 or by email at participant.advocate@hsc.utah.edu.

VOLUNTARY PARTICIPATION
It is up to you to decide whether to take part in this study. Refusal to participate or the decision to withdraw from this research will involve no penalty or loss of benefits to which you are otherwise entitled. This will not affect your relationship with the investigator. There are no costs or compensation for study participation.

COSTS AND COMPENSATION TO PARTICIPANTS
There are no costs or compensation for study participation. The anticipated conclusion of this study is Spring 2013. After the study is completed, I would be happy to share the results with you, as well as any possible recommendations for your student.

CONSENT
By signing this consent form, I confirm that I have read the information in this consent form and have had the opportunity to ask questions. I will be given a signed copy of this consent form. I voluntarily agree to take part in this study.

_____
Printed Name of Participant

_____ _____
Signature of Participant Date

_____
Printed Name of Person Obtaining Consent

_____ _____
Signature of Person Obtaining Consent Date

APPENDIX B

QUESTIONNAIRES

Intervention Rating Scale

Please evaluate the intervention by circling the number which best describes *your* agreement or disagreement with each statement. You *must* answer each question.

1= Strongly Disagree
2= Disagree
3= Slightly Disagree
4= Slightly Agree
5= Agree
6= Strongly Agree

1.	This was an acceptable intervention for the child's problem behavior.	1	2	3	4	5	6
2.	Most teachers would find this intervention appropriate for behavior problems in addition to the one addressed.	1	2	3	4	5	6
3.	The intervention proved effective in changing the child's problem behavior.	1	2	3	4	5	6
4.	I would suggest the use of this intervention to other teachers.	1	2	3	4	5	6
5.	The child's behavior problem was severe enough to warrant use of this intervention.	1	2	3	4	5	6
6.	Most teachers would find this intervention suitable for the behavior problem addressed.	1	2	3	4	5	6
7.	I would be willing to use this in a classroom setting.	1	2	3	4	5	6
8.	The intervention did not result in negative side-effects for the child.	1	2	3	4	5	6
9.	The intervention would be appropriate intervention for a variety of children.	1	2	3	4	5	6
10.	The intervention is consistent with those I have used in classroom settings.	1	2	3	4	5	6
11.	The intervention was a fair way to handle the child's problem behavior.	1	2	3	4	5	6
12.	The intervention is reasonable for the behavior problem addressed.	1	2	3	4	5	6
13.	I like the procedure used in the intervention.	1	2	3	4	5	6
14.	This intervention was a good way to handle this child's behavior problem.	1	2	3	4	5	6
15.	Overall, the intervention was beneficial for the child.	1	2	3	4	5	6
16.	The intervention quickly improved the child's behavior.	1	2	3	4	5	6
17.	The intervention will produce a lasting improvement in the child's behavior.	1	2	3	4	5	6

Adapted from the BIRS (Elliot & Trueting, 1991)

18.	The intervention improved the child's behavior to the point that it would noticeably deviate from other classmate's behavior.	1	2	3	4	5	6
19.	Soon after using the intervention, a teacher would notice a positive change in the problem behavior.	1	2	3	4	5	6
20.	The child's behavior will remain at an improved level even after the intervention is discontinued.	1	2	3	4	5	6
21.	Using the intervention should not only improve the child's problem behavior in the classroom, but also in other settings (e.g., other classrooms, home).	1	2	3	4	5	6
22.	When comparing this child with a well-behaved peer before and after use of the intervention, the child's and the peer's behaviors are more alike after using the intervention.	1	2	3	4	5	6
23.	The intervention produced enough improvement in the child's behavior so the behavior no longer is a problem in the classroom.	1	2	3	4	5	6
24.	Other behaviors related to the problem behavior also are likely to be improved by the intervention	1	2	3	4	5	6

What are the aspects of this intervention that you like?

What if anything did you not like about the intervention?

What did you like about the MotivAider?

What if anything did you not like about the MotivAider

Adapted from the BIRS (Elliot & Trueting, 1991)

The Children's Intervention Rating Scale

1. Watching the video and using the MotivAider seemed fair.	1 - - - 2 - - - 3 - - - 4 - - - 5 - - - 6
2. Watching the video and using the MotivAider was hard.	1 - - - 2 - - - 3 - - - 4 - - - 5 - - - 6
3. Watching the video and using the MotivAider caused problems with my friends.	1 - - - 2 - - - 3 - - - 4 - - - 5 - - - 6
4. There are better ways to help me to stay focused on my work.	1 - - - 2 - - - 3 - - - 4 - - - 5 - - - 6
5. This would be a good program to use with other kids.	1 - - - 2 - - - 3 - - - 4 - - - 5 - - - 6
6. I like this program to help me stay focused.	1 - - - 2 - - - 3 - - - 4 - - - 5 - - - 6
7. I think the videos and the MotivAider helped me do better in school.	1 - - - 2 - - - 3 - - - 4 - - - 5 - - - 6

What did you like about the MotivAider?

What didn't you like about the MotivAider?

What did you like about this program?

What didn't you like about this program?

Adapted from CIRP (Elliot, 1986)

Student:

Child Information Questionnaire

I would appreciate if you would please answer the following questions about your child. Answering any of these questions is optional, but the information will be helpful to me when interpreting the results of the study. All information will be kept confidential. And any identifiers will be removed.

1. Has your child ever been diagnosed with a learning or attention problem?

   If so, what type?

2. Is your child on any medication?

   If so, what type?

3. Is there any other information about your child that you feel might be helpful for me to know?

APPENDIX C

OBSERVATION FORM

Tough Kid Tool Box

REPRODUCIBLE 7-8

Behavior Observation Form

Target Student _____ M/F _____ Grade _____

School _____ Teacher _____ Date _____

Observer _____ Position _____

Class Activity _____

❑ Teacher-directed whole class ❑ Teacher-directed small class ❑ Independent work session

DIRECTIONS: Each box represents a ten-second interval. Observe each student **once**, then record the data. This is a partial interval recording. If possible, collect data for the full 15 minutes under a teacher-directed or independent condition. If this is not possible, put a slash when the classroom condition changes. **Classmates observed must be the same sex as the target student.**

	1						2						3					
Target Student																		
Peer*																		
	4						5						6					
Target Student																		
Peer*																		
	7						8						9					
Target Student																		
Peer*																		
	10						11						12					
Target Student																		
Peer*																		
	13						14						15					
Target Student																		
Peer*																		

*Randomly selected classmate of the same sex

NOTE: To observe class, begin with the first same-sex student in row 1. Record each subsequent same-sex student in following intervals. Data reflect an average of classroom behavior. **Skip unobservable students.**

ON-TASK CODES: Eye contact with teacher or task and performing the requested task.

OFF-TASK CODES:

T = **Talking Out/Noise:** Inappropriate verbalization or making sounds with object, mouth, or body.
O = **Out of Seat:** Student fully or partially out of assigned seat without teacher permission.
I = **Inactive:** Student not engaged with assigned task and passively waiting, sitting, etc.
N = **Noncompliance:** Breaking a classroom rule or not following teacher directions within 15 seconds.
P = **Playing With Object:** Manipulating objects without teacher permission.
\+ = **Positive Teacher Interaction:** One-on-one positive comment, smiling, touching, or gesture.
\- = **Negative Teacher Interaction:** One-on-one reprimand, implementing negative consequence, or negative gesture.
/ = **Neutral Teacher Interaction:** One-on-one expressionless teacher interaction, no approval or disapproval expressed, directions given.

See pp. 121 and 122 for suggestions for use.

APPENDIX D

SELF-MONITORING FORM

Self-Monitoring Form

Student/Team/Class: _____ Date: _____

Behavior: _____

X is ON TASK - is OFF TASK

Directions: When you feel/hear the signal, mark a "X" or a "-" in the first box. Keep working and wait for another signal. When you hear/feel another signal, mark a "X" or a "-" in the next box.

Self-Monitoring Form

Student/Team/Class: _____ Date: _____

Behavior: _____

X is ON TASK - is OFF TASK

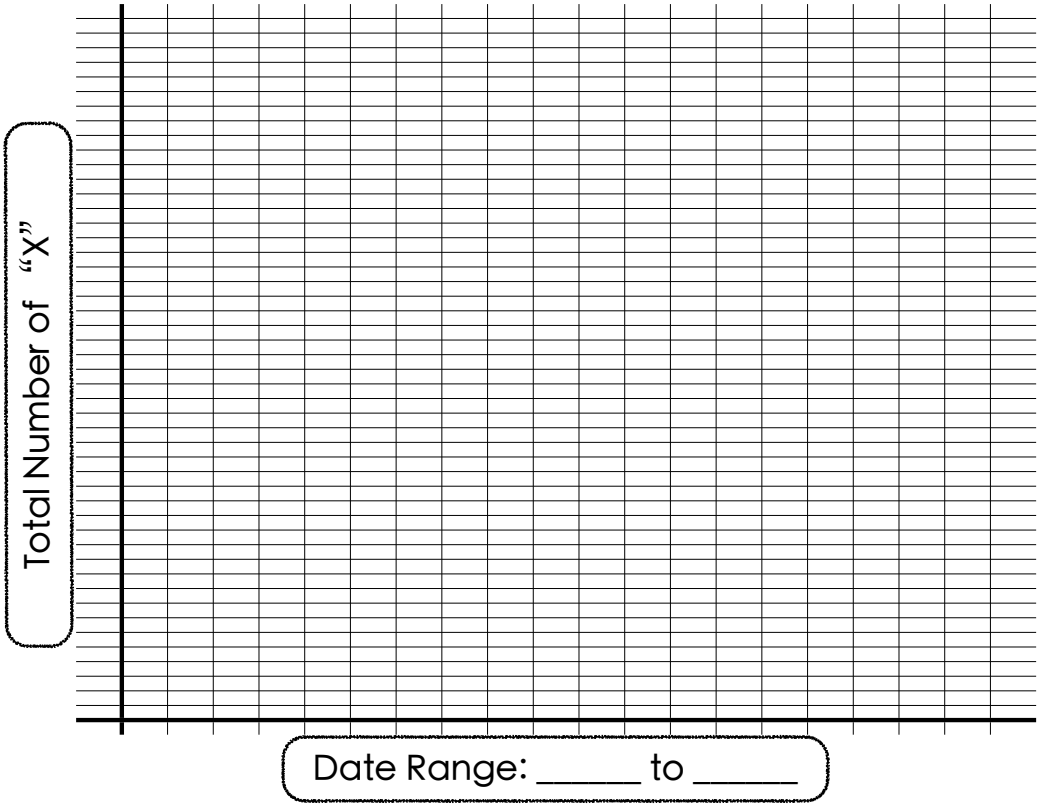
Directions: When you feel/hear the signal, mark a "X" or a "-" in the first box. Keep working and wait for another signal. When you hear/feel another signal, mark a "X" or a "-" in the next box.

APPENDIX E

SELF-PLOTTING GRAPH

Student/Team/Class: _____ Goal: _____

Behavior: _____

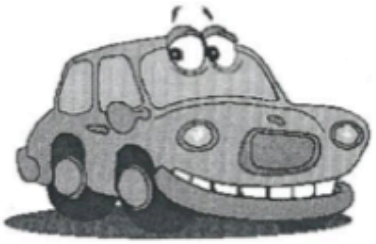


APPENDIX F

FUN ‘O’ METER

Tutoring Fun-O-Meter

Date: _____ Subject: _____



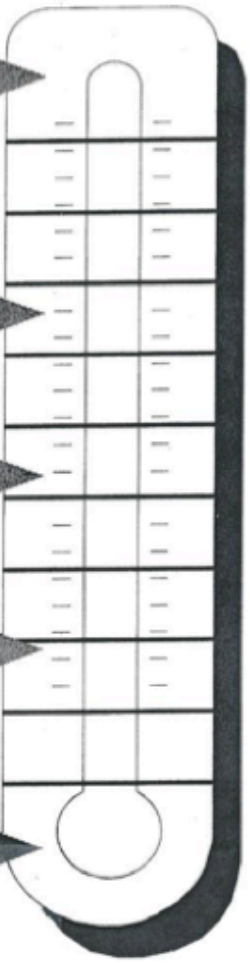
Great!

Go For It!

Getting Better

Ouch!

No Help



APPENDIX G

CURRICULUM-BASED MATH WORKSHEET

Curriculum-Based Assessment Mathematics
Single-Skill Computation Probe: Student Copy

Student:

Date: _____

31 +47	67 +20	24 +73	72 +20	53 +25	10 +67
32 +66	38 +40	21 +27	62 +22	64 +11	27 +61
67 +21	56 +31	27 +50	31 +34	20 +68	35 +63
47 +30	41 +46	12 +65	41 +45	30 +58	27 +60
76 +23	22 +54	10 +57	33 +24	22 +62	51 +26

11 +63	57 +31	25 +72	14 +73	32 +57	36 +50
30 +57	37 +40	12 +75	27 +61	24 +22	41 +12
42 +32	10 +47	40 +41	73 +14	23 +64	82 +27
14 +22	27 +61	27 +51	48 +30	22 +61	44 +15
25 +62	13 +10	67 +20	26 +73	51 +32	45 +32

APPENDIX H

CHECKLISTS

Participant: Site:

Date:

Orientation Session Checklist

1. On the first day when meeting with an individual student, welcome him/her and tell him/her about the On-Task in a Box program.

☐ Indicate it is a program to help them to be on-task in their classroom, work better, and get better grades.

☐ Tell the student that you are going to help them learn to self-record their on-task behavior by using a MotivAider and by watching other students working on a Peer Modeling DVD.

☐ Show the student the MotivAider and Self-Monitoring form. Demonstrate how the MotivAider works by putting it on your belt or in your pocket and set the vibrator to one minute to demonstrate its use.

☐ Tell the student they will learn all the skills they need to know by watching fun Fasthands animation DVD videos.

☐ Tell the student that they will also learn how to keep track of their progress with a Self-Plotting Graph (show him the graph).

☐ Tell the student they will be able to win prizes and rewards with the Reward Spinner and with a Mystery Motivator (show him the Reward Spinner and Mystery Motivator and demonstrate how it works).

2. Play the Fasthands Video with the Sequence for Defining On-task and Off-Task Behaviors for the student

☐ Stop the DVD and ask the student to give you the definition of on-task "*Looking at the teacher or their work and doing what the teacher wants.*"

☐ If the answer is correct go to the next section. If the student does not give you the correct answer, give the student the correct answer, have them repeat it, show the Fasthands video again, and then ask for the definition of on-task.

3. Play the Fasthands Video with the Sequence for Learning How To Self-Record On-Task Behavior for the student

☐ Stop the video and ask the student when should they put an "X" in the box on the Self-Monitoring Form. He/she should answer: *"When I am looking at the teacher or my work and doing what my teacher wants is when I put an "X" in the box on my Self-Monitoring Form."*

☐ Ask them when they should put a "–" in the Self-Monitoring Form box. They should answer, *"When I am not looking at the teacher or my work and am not doing what my teacher wants."*

☐ If the student's answer is correct, go to the next section. If the answer is incorrect or incomplete, give them the correct answer and have them repeat it. Then repeat the Fasthands video and ask them again for the correct answer.

4. Play the Fasthands Video with the Sequence on How to Record On-task Progress on the Self-Plotting Graph for the student

☐ Stop the video and ask how they should self-record their progress: They should answer: "*Count the number of Xs on your Self-Monitoring form. Find this number on the Self-Plotting graph, mark it, and connect this number to the previous day's number."*

☐ Ask them how to tell if they are making progress. They should answer: *"If the line on the graph is going up, I am making progress. If the line is flat or going down I am not making progress."*

☐ If they are correct in their answer, go to the next section. If they are incorrect, give them the correct answer, and have them repeat it. Repeat the Fasthands video and ask them the questions again.

5. Show the first scenario from the Peer Modeling Video

☐ Have the student set the MotivAider to vibrate randomly at one-minute intervals and put it on their belt or in their pocket.

☐ Give them a Self–Monitoring Form and pencil.

☐ Start the Peer-Modeling DVD scenario and have them watch it and self-record the peer's on-task behavior on the Self-Monitoring Form.

☐ At the end of the observation have the student count the number of Xs on the form.

☐ Have the student mark the number on the Self-Plotting Graph.

☐ Praise the student for their success and make any needed corrective comments about the observation and self-monitoring procedures.

6. Debrief the student and getting them ready for the next meeting

☐ Give the student the MotivAider, a Self-Monitoring Form, and if necessary a pencil.

☐ Have them model one more time how to set the MotivAider to vibrate at one minute intervals and put it on their belt or in their pocket.

☐ Tell the student to take it back to class and give the MotivAider and Self-Monitoring Form to his teacher.

☐ Indicate that his/her teacher will have him/her self-record their on-task behavior back in the regular classroom.

☐ Tell him them that the next time they come to your office, you are going to have them practice their recording of on-task behavior by watching the peer modeling videos.

☐ Ask the student to bring an example of academic work that they have done in the general classroom. Indicate that sometimes he will receive a bonus Reward Spin if he brings the academic work to the next appointment.

☐ Make the next appointment with the student.

7. Reward the student with the Reward Spinner and Mystery Motivator

✸ After the student has finished the Fasthands videos, recorded the on-task behavior of the peer on the peer modeling video, and is debriefed and ready to return to their class, they are reinforced.

☐ Have the student spin the arrow on the Reward Spinner and give them whatever reinforcer the arrow lands on (*either a numbered reinforcer wedge or the Mystery Motivator*).

☐ Always congratulate the student and praise their efforts and tell them you look forward to their next meeting.

*Adapted with permission from On-Task in a Box, Jenson & Sprick (in press)

Participant: Site:

Date:

Intervention Session Checklist

1. When the students first comes to the Intervention Session

- ☐ Greet the student and thank them for coming.
- ☐ Ask if they have their MotivAider and their Self-Monitoring Form (If not, they may have to go to back to class and get them).
- ☐ Ask the student if he/she brought an example of their general classroom academic work?
- ☐ Ask them about their experience using the MotivAider and self-monitoring their on-task behavior in the general classroom (If there was a problem, make note of this to bring up in the next teacher conference meeting)

✸ The check for student knowledge of the program below may be skipped when it is evident the student knows this information:

- ☐ Check for the student understanding of the On-Task in a Box program.
- ☐ Ask the student the definition of on-task (If there is a mistake, reshow the Fasthands video).
- ☐ Ask the student if they remember how to use the MotivAider and record on-task behavior (If there is a mistake, reshow the Fasthands video).

2. Review the student's academic work example

- ☐ Ask to see the work the student has brought to the session.
- ☐ Praise the student for bringing it and for how the work looks (make a specific comment about something you like).
- ☐ Make note of the quality of the work. If there is a problem with the work or the student did not bring the work, make a note to discuss it at the next teacher conference meeting. You may return the work to the student or keep it in a file to document progress when you meet with the teacher.

☐ Tell the student that when he/she brings an example of his academic work that he/she may get a bonus reward spin. Approximately once every three of four times when the student brings the work, have them spin the Reward Spinner for the bonus reward.

3. Plot the Student's Progress

☐ Ask the student to count the number of Xs for on-task behavior that they have on their Self-Monitoring Form. The student may have more than one Self-Monitoring Form if they used the MotivAider and self-recorded more than once in the general classroom between sessions. If this is the case, help them take an average (i.e. all the number of Xs on the forms divided by the number of forms) to get one number.

☐ Give the student their Self-Plotting Graph, date it, and have them find and mark the number on the graph.

☐ Have the student connect the numbers between the days to form a line.

☐ Ask the student if it is going up showing progress or staying flat or going down indicating no progress.

☐ Praise the student for their efforts even if they are not making progress. Tell them it is going to get better.

☐ If the student has trouble plotting their progress, reshow the Fasthands video on *How to Plot Progress on the Self-Plotting Graph*.

☐ Keep the Self-Plotting Graph in a student file possibly with the examples of academic work the student has brought to the session. These can be reviewed at the next teacher conference meeting.

4. Practicing Recording On-Task Behavior from the Peer Modeling Video:

✸ The goal of observing a peer model's on-task behavior is not to improve self-monitoring behavior. Rather, the research indicates the primary active variable for improving on-task behavior in a student is the observation of another peer demonstrating on-task behaviors.

☐ Load the Peer Modeling Video in the computer. Pick a scenario of a peer approximately the same age and sex as the student with whom you are working.

☐ Give the student the MotivAider set to vibrate randomly at one-minute intervals, a Self-Monitoring Form, and a pencil.

☐ Tell the student that you want them to observe the peer in the video and record the peer's on-task behavior when the MotivAider vibrates.

☐ Start the peer video and play it for at least 5 minutes with the student observing.

☐ During the five minute observation, reinforce the student for watching the peer video and coach his/her performance. Statements should be made approximately every 30 seconds (10 coaching states in a 5 minute observation).

Example Statements:

Wow! Way to look at the video!

Did you see that? The kid in the video went off-task but came right back on!

Hey, you caught that on-task and wrote it down went the MotivAider vibrated!

Keep on watching you've got this down!

Cool, you aren't missing a thing!

You have eagle eyes!

Way to keep watching!

You've got it down! Way to be glued to watching!

Never seen sharper eyes on the peer!

Sweet! You are locked on!

☐ After the approximate 5-minute observation stop the video and praise the student for working with you and emphasize the progress he is making. Indicate you will be meeting with their teacher soon and will show her how much process they have made.

5. Debrief the Student and Get them Ready for the Next Meeting

☐ Give the student the MotivAider, a Self-Monitoring Form, and if necessary a pencil.

☐ Have them model one more time how to set the MotivAider to vibrate at one minute intervals and put it on their belt or in their pocket.

☐ Tell them to take it back to class and give the MotivAider and Self-Monitoring Form to their teacher.

- ☐ Indicate that their teacher will have them self-monitor their on-task behavior back in the classroom.

- ☐ Tell them that the next time they come to your office, you are going to have them practice more recording of on-task behavior by watching the peer modeling videos.

- ☐ Ask the student to bring an example of academic work they have done in the general classroom. Indicate that sometimes he/she will receive a bonus Reward Spin if they bring their academic work to the next appointment.

- ☐ Make the next appointment with the student.

6. Reward the Student with the Reward Spinner

✸ After the student has finished the recording and observing the behavior of the peer on the peer modeling video, has been debriefed, they are reinforced.

- ☐ Have the student spin the arrow on the Reward Spinner and give him/her whatever reinforcer (i.e. numbered reinforcer wedge or Mystery Motivator) the arrow lands on.

- ☐ Always congratulate the student and praise his/her efforts and tell them you look forward to their next meeting.

7. Student Marking the Fun'O'Meter or Student Feedback Form

- ☐ After the student has been rewarded, have them mark the Fun'O'Meter.

- ☐ Ask the student if they liked the session and thought it was useful.

- ☐ If the student marks the Fun'O'Meter in the "Ouch" or "No Help" regions, ask them what is wrong and how you could make it better.

- ☐ Try to adjust the sessions to the student's needs to make it fun and helpful.

*Adapted with permission from On-Task in a Box, Jenson & Sprick (in press)

Teacher: Site:

Date:

Teacher Implementation Steps

1. **Pick a set time daily for the student to self-monitoring their on-task behavior.**

   - This time period should be for approximately 30 minutes.

   - The self-monitoring should take place during independent seatwork time in math (ex. math sheet or work paper).

2. **Before the student starts self-monitoring the teacher should make sure the student has:**

   a. The MotivAider on their belt or in their pocket
   b. The Self-Monitoring Form
   c. A pencil to collect the data
   d. The MotivAider set to vibrate randomly at one-minute intervals

3. **The teacher should indicate to the student when they should start self-monitoring with the MotivAider.**

4. **After the self-monitoring period, the teacher should:**

   - Collect the Self-Monitoring form and MotivAider from the student.

   - They can be returned just before the next scheduled office visit.

5. **When the teacher collects the Self-Monitoring Form and MotivAider from the student, she or he should praise the student's behavior and progress.**

   - Being positive and describing the student's progress is an important motivational component of the program.

6. **When the student is ready to go to the next scheduled office visit with the program implementer**:

   - The teacher should give the student the MotivAider, the completed Self-Monitoring Forms, and an example of the student's academic work from the classroom.

   - This academic work can be a math worksheet, spelling test, or other example of the student's efforts. Optimally, the academic work example could be something the student was working on while using the MotivAider and self-monitoring their on-task behavior. If not, another example can be sent.

   - If possible, the academic work example should be a positive example of the student's academic efforts. The program implementer will review it at the beginning of the next scheduled office visit.

Classroom Observations

- Each observation will last 15 minutes.

- During each observation, the teacher should provide the student with their curriculum based math worksheet.

- Students should only work on the curriculum based math worksheet while being observed.

- After the observation is completed, have the student give back the curriculum based math worksheet and move on to another assignment or task.

Planned Observations for the Week of _____

Monday	Tuesday	Wednesday	Thursday	Friday

*Adapted with permission from On-Task in a Box, Jenson & Sprick (in press)

Teacher: Site:

Date:

Weekly Teacher Follow-Up Meeting Checklist

- ☐ Make an appointment with the teacher for the meeting and enter it on your calendar (It helps if you can make this a standing weekly meeting).
- ☐ In the meeting emphasize how much progress the student is making and how much you appreciate the teacher's willingness to be a partner in the intervention.
- ☐ Review with the teacher the student's on-task behavior on his/her Self-Plotting Graph.
- ☐ Review with the teacher the examples of academic assignments the student has brought to the weeks intervention sessions.
- ☐ Review the student's ratings of the intervention sessions with the student marked and rated Fun'O'Meter.
- ☐ Ask the teacher if she thinks the on-task self-monitoring with the MotivAider is helping the student in the classroom.
- ☐ If there are problems, troubleshoot solutions to possibly be implemented.
- ☐ Remind the teachers of the times that you will be coming in to observe the student while they are using the MotivAider.
- ☐ End the session by making another appointment and emphasize with the teacher how valuable her collaboration with you is in making the student successful with his/her on-task behavior and academic achievement.

*Adapted with permission On-Task in a Box, Jenson & Sprick (in press)

REFERENCES

Amato-Zech, N. A., Hoff, K. E., & Doepke, K. J. (2006). Increasing on-task behavior in the classroom: Extensions of self-monitoring strategies. *Psychology in the Schools*, *43*(2), 211-221.

American Academy of Pediatrics (2011). Adhd: Clinical practice guideline for the diagnosis, evaluation, and treatment of attention-deficit/hyperactivity disorder in children and adolescents. *Pediatrics, 128*, 1007-1022.

Agran, M., Sinclair, T., Alper, S., Cavin, S., Wehmeyer, M., & Hughes, C. (2005). Using self-monitoring to increase following-direction skills of students with moderate to severe disabilities in general education. *Education and Training in Developmental Disabilities*, *40*(1), 3-13.

Baker, S.D., Lang, R., & O'Reilly, R. (2009). Review of video modeling with students with emotional and behavioral disorders. *Education and Treatment of Children*, *32*(3), 402-420.

Bandura, A. (1977). *Social learning theory*. Englewood Cliffs, NJ: Prentice Hall.

Bandura, A. (1982) Self-efficacy mechanism in human agency. *American Psychologist, 37*,122-147.

Bandura, A. (1986). *Social foundations of thought and action.* Englewood Cliffs, NJ: Prentice-Hall.

Bandura, A. (1997). *Self-efficacy: The exercise of control*. New York: Freeman.

Barkley, R.A. (1993). Eight principles to guide adhd children. *The ADHD Report*, 1(2). Retrieved from http://users.rcn.com/peregrin.enteract/add/8hints.html

Bellini S., & Akullian J. (2007). A meta-analysis of video modeling and video self-modeling interventions for children and adolescents with autism spectrum disorders. *Exceptional Children*, *73*(3), 264-287.

Bellini, S., Akullian, J., & Hopf, A. (2007). Increasing social engagement in young children with autism spectrum disorders using video self-modeling. *School Psychology Review*, *36*(1), 80-90.

Bilias-Lolis, E., Chafouleas, S.M., Kehle, T.J., & Bray, M.A. (2012). Exploring the utility of self-modeling in decreasing disruptive behavior in students with intellectual disability. *Psychology in the Schools*, *49*(1), 82-92.

Block. H. (2010). *"Superhero social skills": A pilot study examining an evidence-based program for elementary-aged students with autism spectrum disorders in a school setting* (Doctoral dissertation, University of Utah, Salt Lake City).

Bowen, J., Jenson, W.R., & Clark, E. (2004). *School based interventions for students with behavior problems*. New York, NY: Springer.

Briesch, A.M., & Chafouleas, S.M. (2009). Review and analysis of literature on self-management interventions to promote appropriate classroom behaviors (1988-2008). *School Psychology Quarterly*, *24*(2), 106-118.

Brigman, G., Lane, D., Switzer, D., Lane, D., & Lawrence, R. (1999). Teaching children school success skills. *The Journal of Educational Research*, *92*(6), 323-329.

Bruce, A., Lloyd, J.W., & Kennedy, M.J. (2012). Targets of self-monitoring: Productivity, accuracy, and attention. In B. Cook, M. Tankersley, & T. Landrum, (Eds.), *Advances in learning and behavioral disabilities: Vol. 25. Classroom behavior, contexts, and interventions* (pp. 1-21). doi:10.11/S0735-004X

Buggey, T. (2007) A picture is worth…Video modeling applications at school and home. *Journal of Positive Behavior Interventions*, *9*(3), 151-158.

Buggey, T., & Ogle, L. (2012). Video self-modeling. *Psychology in the Schools*, *49*(1), 52-70.

Busk, P. L., & Serlin, R. C. (1992). Meta-analysis for single-case research. In T. R. Kratochwill & J. R. Levin (Eds.), *Single-case research design and analysis: New directions for psychology and education* (pp.187-209). Hillsdale, NJ: Erlbaum.

Charlop-Christy, M.H., Le, L., & Freeman, K.A. (2000). A comparison of video modeling with in vivo modeling for teaching children with autism. *Journal of Autism and Developmental Disorders*, *30*(6), 537-552.

Choi, J. (2012). MotivAider: What walking the walk can really accomplish. *Toys are Tools*. Retrieved from http://www.toysaretools.com/2012/06/review-and-giveaway-motivaider-what.html

Christensen, L., Young, R.K., & Marchant, M. (2004). The effects of a peer-mediated positive behavior support program on socially appropriate classroom behavior. *Education and Treatment of Children*, *27*(3), 199-234.

Clare, S. K. (1992). *Self-modeling and peer-modeling used as treatment components for increasing on-task behavior* (Doctoral dissertation, University of Utah, Salt Lake City).

Clare, S. K., Jenson, W. R., Kehle, T. J., & Bray, M. A. (2000). Self-modeling as a treatment for increasing on-task behavior. *Psychology in the Schools*, *37*(6), 517-522.

Clark, E., Kehle, T. J., Jenson, W. R., & Beck, D. E. (1992). Evaluation of the parameters of self-modeling interventions. *School Psychology Review*, *21*(2), 246-254.

Cohen, J. (1988). *Statistical power analysis for the behavioral sciences* (2nd ed.). Hilldale, NJ: Lawrence Erlbaum Associates.

Collier-Meek, M.A., Fallon, L.M., Johnson, A.H., Sanetti, L.M., & DelCampo, M.A. (2012). Constructing self-modeling videos: Procedures and technology. *Psychology in the Schools*, *49*(1), 3-14.

Coughlin, J., McCoy, K.M., Kenzer, A., Mathur, S.R., & Zucker, S.A. (2012). Effects of a self-monitoring strategy on independent work behavior of students with mild intellectual disability. *Education and Training in Autism and Developmental Disabilities, 47*(2), 154-164.

Coyle, C., & Cole, P. (2004). A videotaped self-modeling and self-monitoring treatment program to decrease off-task behaviour in children with autism. *Journal of Intellectual & Developmental Disabilities*, *29*(1), 3-15.

Cuvo, J. C. (1979). Multiple-baseline design in instructional research: Pitfalls of measurement and procedural advantages. *American Journal of Mental Deficiency 84*(3), 219-228.

Dalton, T., Martella, R.C., & Marchand-Martella, N.E. (1999). The effects of a self-management program in reducing off-task behavior. *Journal of Behavioral Education*, *9*(3/4), 157-176.

Davis, R.A. (1979). The impact of self-modeling on problem behaviors in school-age children. *School Psychology Digest*, *8*(1), 128-132.

Delano, M.E. (2007). Video modeling interventions for individuals with autism. *Remedial and Special Education*, *28*(1), 33-42.

DiGangi, S.A., Maag, J.W., & Rutherford, R.B. (1991). Self-graphing of on-task behavior: Enhancing the reactive effects of self-monitoring on on-task behavior and academic performance. *Learning Disability Quarterly*, *14*(3), 221-230.

Dingfelder, H.E, & Mandell, D.S. (2011). Bridging the research-to-practice gap in autism intervention: An application of diffusion of innovation theory. *Journal of Autism and Developmental Disorders*, *41*(5), 597-609.

DiPerna, J.C., & Elliot, S.N. (2002). Promoting academic enablers to improve student achievement: An introduction to the mini-series. *School Psychology Review*, *31*(3), 293-297.

DiPerna, J.C., Volpe, R.J., & Elliot, S.N. (2001). A model of academic enablers and elementary reading/language arts achievement. *School Psychology Review*, *31*(3), 298-312.

Dodson, K.L. (2008). *Self-monitoring to increase time on-task and its impact on accuracy: Is the MotivAider necessary?* (Doctoral dissertation, University of Utah, Salt Lake City).

Dowrick, P.W. (1999). A review of self modeling and related interventions. *Applied & Preventative Psychology*, *8*, 23-39.

Dowrick, P.W. (2012). Self-modeling: Expanding the theories of learning. *Psychology in the Schools*, *49*(1), 30-41.

Dowrick, P.W., Kim-Rupnow, W.S., & Power, T.J. (2006). Video feedforward for reading. *The Journal of Special Education*, *39*(4), 194-207.

Ducharme, J.M., & Shecter, C. (2011). Bridging the gap between clinical and classroom intervention: Keystone approaches for students with challenging behavior. *School Psychology Review*, *40*(2), 257-274.

Elliott, S. N. (1986). Children's ratings of the acceptability of classroom interventions for misbehavior: Findings and methodological considerations. *Journal of School Psychology*, *24*, 23-35.

Elliott, S.N. (1988). Acceptability of behavioral treatments in educational settings. In J. C. Witt, S. N. Elliott, & F.M. Gresham (Eds.), *Handbook of behavior therapy in education* (pp. 121-150). New York, NY: Plenum.

Elliott, S. N., & Treuting, M. V. (1991). The behavior intervention rating scale: Development and validation of a pretreatment acceptability and effectiveness measure. *The Journal of School Psychology*, *29*, 43-51.

Flaute, A.J., Peterson, S.M., Van Norman, R.K., Riffle, T., & Eakins, A., (2005). Motivate me! 20 tips for using the motivaider for improving your classroom. *Teaching Exceptional Children Plus*, 2(2), Article 3. Retrieved from http://escholarship.bc.edu/education/tecplus/vol2/iss2/art3

Geiger, K.B., LeBlanc, L.A., Dillon, C.M., & Bates, S.L. (2010). An evaluation of preference for video and in vivo modeling. *Journal of Applied Behavior Analysis*, *43*(2), 279-283.

Gena, A., Couloura, S., & Kymissis, E. (2005). Modifying the affective behavior of preschoolers with autism using in-vivo or video modeling and reinforcement contingencies. *Journal of Autism and Developmental Disorders*, *35*(5), 545-556.

Harris, K. R., Freidlander, B.D., Saddler, B., Frizzelle, R., & Graham, S. (2005). Self-monitoring of attention versus self-monitoring of academic performance: Effects among students with adhd in the general education classroom. *The Journal of Special Education*, *39*(3), 145-156.

Hartup, W.W., & Lougee, M.D. (1975). Peers as models. *School Psychology Digest*, *4*, 11-21.

Hitchcock, C. H., Dorwrick, P. W., & Prater, M. A. (2003). Video self-modeling intervention in school-based settings. *Remedial and Special Education*, *24*(1), 36-45.

Holifield, C., Goodman, J., Hazelkorn, M., & Heflin, L.J. (2010). Using self-monitoring to increase attending to task and academic accuracy in children with autism. *Focus on Autism and Other Developmental Disabilities*, *25*(4), 230-238.

Hood, J. (2011*). Superheroes social skills: A study examining the effects of using an evidence-based approach to teach social skills to children with high-incidence disabilities* (Doctoral dissertation, University of Utah, Salt Lake City).

Horner, D. R., & Baer, D. M. (1978). Multiple-probe technique: A variation of the multiple baseline. *Journal of Applied Behavior Analysis*, *11*, 189-196.

Jenson, W. R., Rhode, G., & Reavis, H. K. (1995). *The tough kid tool box*. Longmont, CO: Sopris West.

Jenson, W.R., & Sprick, M. (in press). *On-Task in a Box*.

Johnson, S. E. (2007). *The effects of a silent signaling device on math performance for children rated as inattentive by teacher or parent* (Doctoral dissertation, University of Utah, Salt Lake City).

Joseph, L.M., & Eveleigh, E.L. (2011). A review of the effects of self-monitoring on reading performance of students with disabilities. *The Journal of Special Education*, *45*(1), 43-53.

Kehle, T.J., Bray, M.A., Byer-Alcorace, G.F., Theodore, L.A., & Kovac, L.M. (2012). Augmented self-modeling as an intervention for selective mutism. *Psychology in the Schools*, *49*(1), 93-103.

Kehle, T.J., Clark, E., Jenson, W.R., & Wampold, B. R. (1986). Effectiveness of self-observation with behavior disordered elementary school children. *School Psychology Review*, *15*(2), 289-295).

King, B.S. (2012). *Self- and peer-modeling combined with self-monitoring to increase rates of on-task behavior* (Masters thesis, University of Utah, Salt Lake City).

Lam, A.L., Cole, C.L., Shapiro, E.S., & Bambara, L.M. (1994). Relative effects of self-monitoring on-task behavior, academic accuracy, and disruptive behavior in students with behavior disorders. *School Psychology Review*, *23*(1), 44-58.

Leflot, G., Lier, P., Onghena, P., & Colpin, H. (2013). The role of children's on-task behavior in the prevention of aggressive behavior development and peer rejection: A randomized controlled study of the good behavior game in belgian elementary classrooms. *Journal of School Psychology*, *51*, 187-199.

Legge, D.B., DeBar, R.M., & Alber-Morgan, S.R. (2010). The effects of self-monitoring with a motivaider on the on-task behavior of fifth and sixth graders with autism and other disabilities. *The Journal of Behavior Assessment and Intervention in Children*, *1*(1), 43-52.

Levison, S., Kopari, J., & Fredstrom, J. (2011). *Helping kids change their own behavior: The helper's guide to the motivaider method*. Retrieved from http://habitchange.com/docn/helpkidschange.pdf

Levison, S., & Young, R.C. (2008), *The complete guide to the motivaider personal achievement system*. Retrieved from http://habitchange.com/docn/completeguide.pdf

Lloyd, J.W., Bateman, D.F., Landrum, T.J., & Hallahan, D.P. (1989). Self-recording of attention versus productivity. *Journal of Applied Behavior Analysis*, *22*(3), 315-323.

Maag, J.W., Reid. R., & DiGangi, S.A. (1993). Differential effects of self-monitoring attention, accuracy, and productivity. *Journal of Applied Behavior Analysis*, *26*(3), 329-344.

Madaus, M.R., & Ruberto, L.M. (2012). Application of self-modeling to externalizing and internalizing disorders. *Psychology in the Schools*, *49*(1), 42-51.

Marner, K. (2010, Fall). Motivaider: Adhd product review. *ADDitude*. Retrieved from http://additudemag.com

Mason, R.A., Ganz, J.B., Parker, R.I., Burke, M.D., & Camargo, S.P. (2012). Moderating factors of video-modeling with others as model: A meta-analysis of single-case studies. *Research in Developmental Disabilities*, *33*(4), 1076-1086.

Mathes, M.Y., & Bender, W.N. (1997). The effects of self-monitoring on children with attention-deficit/hyperactivity disorder who are receiving pharmacological interventions. *Remedial and Special Education*, *18*(2), 121-128.

McKissick, C., Hawkins, R.O., Lentz, F.E., Hailley, J., & McGuire, S. (2010). Randomizing multiple contingency components to decrease disruptive behaviors and increase student engagement in an urban second-grade classroom. *Psychology in the Schools*, *47*(9), 944-959.

MotivAider. (2000). Thief River Falls, MA: Behavioral Dynamics.

National Association of School Psychologists. (2010). *Model for Comprehensive and Integrated School Psychological Services, NASP Practice Model Overview*. [Brochure]. Bethesda, MD: Author.

Nystrand, M., & Gamoran, A. (1991). Instructional discourse, student engagement, and literature achievement. *Research in the Teaching of English*, *25*(3), 261-290.

Okano, M. (2009, Winter). Motivaide!. *Meeting point: Latest from Lovaas*. Retrieved from http://lovaas.com/meetingpoint-2009-01-article-03.php

Olive, M.L., & Smith, B.W. (2005). Effect size calculations and single subject designs. *Educational Psychology*, *25*(2-3), 313-324.

Perry, V., Albeg, L., & Tung, C. (2012). Meta-analysis of single-case design research on self-regulatory interventions for academic performance. *Journal of Behavioral Education*, *21*(3), 217-229.

Ponitz, C.C., Rimm-Kaufman, S.E., Grimm, K.J., & Curby, T.W. (2009). Kindergarten classroom quality, behavioral engagement, and reading achievement. *School Psychology Review*, *38*(1), 102-120.

Possell, L.E., Kehle, T.J., Mcloughlin, C.S., & Bray, M.A. (1999). Self-modeling as an intervention to reduce disruptive classroom behavior. *Cognitive and Behavioral Practice*, *6*, 99-105.

Prater, M., & Hogan, S. (1992).Using self-monitoring to improve on-task behavior and academic skills of an adolescent with mild handicaps across special and regular education settings. *Education and Treatment of Children*, *15*, 43-56.

Prater, M.A., Carter, N., Hitchcock, C., & Dowrick, P. (2012). Video self-modeling to improve academic performance: A literature review. *Psychology in the Schools*, *49*(1), 71-81.

Prater, M.A., Joy, R., Chilman, B., Temple, J., & Miller, S.R. (1991). Self-monitoring of on-task behavior by adolescents with learning disabilities. *Learning Disability Quarterly*, *14*(3), 164-177.

Quillivan, C.C., & Skinner, C.H. (2011). How to use a cell phone to prompt classroom self-monitoring. *Journal of Evidence-Based Practices for Schools*, 12(2), 147-150.

Reavis, K.H., Kukic, S.J., Jenson, W.R., Morgan, D.P., Andrews, D.P., & Fister, S.F. (1996). *Best practices: Behavioral and educational strategies for teachers*. Longmont, CO: Sopris West.

Reid, R. (1996). Research in self-monitoring with students with learning disabilities: The present, the prospects, the pitfalls. *Journal of Learning Disabilities*, *29*(3), 317-331.

Rhode, G., Jenson, W.R., & Reavis, K. (2010). *The tough kid book: Practical classroom strategies*, 2nd ed. Eugene, OR: Pacific Northwest.

Richards, L. C. (2002). *A videotaped peer modeling intervention to increase on-task behavior in school* (Masters thesis, University of Utah, Salt Lake City).

Richards, L. C., Heathfield, L. T., & Jenson, W. R. (2010). A classwide peer-modeling intervention package to increase on-task behavior. *Psychology in the Schools*, *47*(6), 551-566.

Roberts, M. (2003). Off-task behavior in the classroom: Applying fba and cbm. *NASP Toolkit: Practical resources at your fingertips on CD*. Bethesda, MD: NASP.

Schunk, D. H. (1987). Peer models and children's behavioral change. *Review of Educational Research*, *57*(2), 149-174.

Schunk, D.H. (1991). Self-efficacy and academic motivation. *Educational Psychologist*, *26*, 207-231.

Schunk, D.H., & Hanson, A.R. (1989). Self-modeling and children's cognitive skill learning. *Journal of Educational Psychology*, *81*(2), 155-163.

Schunk.D.H., Hanson, A.R., & Cox, P.D. (1987). Peer-model attributes and children's achievement behaviors. *Journal of Educational Psychology*, *79*(1), 54-61.

Scruggs, T.E., & Mastropieri, M.A. (1998). Summarizing single-subject research: Issues and applications. *Behavior Modification*, *22*, 221-242.

Shapiro, E.S. (2004). *Academic skills problems: Direct assessment and intervention* (3rd ed.). New York, NY: The Guilford Press.

Sheffield, K., & Waller, R.J. (2010). A review of single-case studies utilizing self-monitoring interventions to reduce problem classroom behaviors. *Beyond Behavior*, *19*(2), 7-13.

Shinn, M.R. (2004). *Administration and scoring of mathematics computation curriculum-based measurement (M-CBM) and math facts probes for use with AIMSweb*. Retrieved from https://aimsweb.pearson.com/downloads/AdminAndScoringM-CBM.pdf

Southall, C.M., & Gast, D.L. (2011). Self-management procedures: A comparison across the autism spectrum. *Education and Training in Autism and Developmental Disabilities*, *46*(2), 155-171.

Thelen, M.H., Fry, R.A., Fehrenbach, P.A., & Frautschi, N.M. (1979). Therapeutic videotape and film modeling: A review. *Psychological Bulletin*, *86*(4), 701-720.

Vance, M.J., Gresham, F.M., & Dart, E.H. (2012). Relative effectiveness of dro and self-monitoring in a general education classroom. *Journal of Applied School Psychology*, *28*(1), 89-109.

Vygotsky, L.S. (1978). *Mind in society*. Cambridge, MA: Harvard University Press.

Walker, H.M. (2004). Commentary: Use of evidence-based intervention in schools: Where we've been, where we are, and where we need to go. *School Psychology Review*, *33*(3), 398-407.

Walker, H.M., Ramsey, E., & Gresham, F.M. (2004). *Antisocial behavior in school: Evidence-based practices* (2nd ed.). Belmont, CA: Wadsworth.

Walker, H.M., & Rankin, R. (1983). Assessing the behavioral expectations and demands of less restrictive environments. *School Psychology Review*, *12*, 274-284.

Wang, S., Cui, Y., & Parrila, R. (2011). Examining the effectiveness of peer-mediated and video-modeling social skills interventions for children with autism spectrum disorders: A meta-analysis in single-case research using hlm. *Reasearch in Autism Spectrum Disorders*, *5*(1), 562-569.

Wehmeyer, M.L. (2007). *Promoting self-determination in students with developmental disabilities*. New York, NY: Guilford Press.

Wolfe, L.H., Heron, T.E., & Goddard, Y.L. (2000). Effects of self-monitoring on the on-task behavior and written language performance of elementary students with learning disabilities. *Journal of Behavioral Education*, *10*(1), 49-73.

Wood, S. J., Murdock, J. Y., Cronin, M. E., Dawson, N. M., & Kirby, P. C. (1998). Effects of self-monitoring on on-task behaviors of at-risk middle school students. *Journal of Behavioral Education*, *8*(2), 263-279.